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REPORT OF THE ANALYSIS OF THE JOINT MEDIUM RANGE AIR TO SURFACE--ETC(U)
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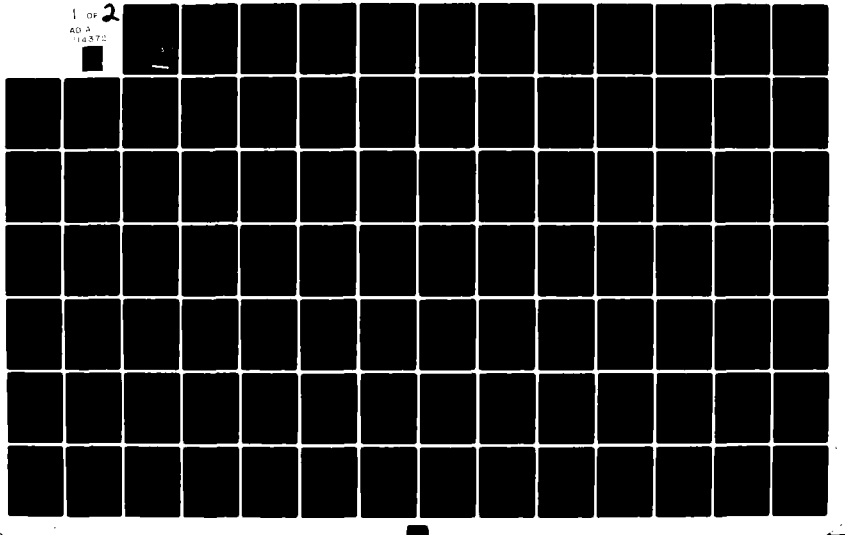

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REPORT OF THE ANALYSIS OF THE JOINT MEDIUM RANGE AIR TO SURFACE MISSILE PROGRAM

TECHNICAL FINAL REPORT

23 January 1980

Prepared Under Contract No.
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STUDY FOCUS AND BACKGROUND

STUDY FOCUS:

The objective of the Maxfield Associates, Ltd., (MAL), effort completed between July, 1979 and January, 1980 was to investigate technical alternatives and make recommendations concerning management approaches to accomplish the project goals. The purpose of this report is to formalize those recommendations and to identify future courses of action alternatives which should be considered in moving toward successful accomplishment of the program goals.

The investigations and analyses yielded data relative to approaches and model structures necessary to accomplish project goals. At the request of the program office, results were submitted together with recommendations on preliminary technical alternatives as they were derived during the course of the study. The objective was to provide the project office with data as early as possible to maximize program efficiency. These preliminary results have been refined as appropriate and included as appendices to this report.

BACKGROUND:

The basic concepts incorporated in a supersonic stand-off, air-to-surface missile have existed in Navy advance planning for many years. Navy action on this concept was formalized in 1967 with the decision to initiate a funded technology

program to produce a system technology prototype of an advance tactical stand-off missile. Parallel development of propulsion, guidance, and other subsystem technologies conducted by the Air Force, industry, and other countries have also contributed to the current technology base.

By 1975 air-to-surface (ASM) guidance work had demonstrated the feasibility of a high performance, low-cost inertial guidance unit based on laser gyro concepts. During this same time period, an ASM propulsion technology effort was moving ahead. Feasibility of supersonic flight with an integral-rocket ramjet of a representative missile airframe was demonstrated with the completion of five flights of a Low Volume Ramjet (ALVRJ) in 1976.

In May 1978, the Chief of Naval Operations established a requirement for a survivable medium range air-to-surface missile with the issuance of operational requirement W-0650-TW, "Medium Range Air-to-Surface Missile". The requirements delineates the need for an offensive air-to-surface missile that can penetrate and survive against defenses expected to be encountered in the 80's and 90's.

In response to the operational requirement, the Naval Air Systems Command structured an acquisition program based on evolution of the supersonic missile technology effort into the Medium Range Air-to-Surface Mission (MRASM) system acquisition program. Funds for the program start were requested in the FY-79 budget submitted to Congress. The FY-79 appropriation bill provided the funds for initiation of the MRASM program and directed that it be a joint Navy and Air Force program.

Taking the lead, the Navy modified its acquisition planning to address a joint program to achieve an IOC in the mid to late 1980's. Concurrently, the Office of the Secretary of Defense directed that the program:

a) Proceed in accordance withOMB Circular A-109, and

b) Select an independent contractor to initiate a study to examine the need, operational requirements, development alternatives, cost and effectiveness of adding a JMRASM to aircraft weapons.

In conjunction with the above direction, OSD delayed the use of the FY-79 funds except those required for program planning and conduct of the study.

In the meantime, the House Armed Services Committee (HASC), in its action on the FY-80 authorization bill, declared that the need for the JMRASM effort was of sufficient urgency to warrant accelerating the program to achieve to a late 1984 initial production capability. The HASC pointed out that the technology for a MRASM had been proven. As a result, it authorized an additional $15 million to accelerate the program. Congress subsequently appropriated the total $30 million package to support JMRASM in FY-80.

In June/July 1979 time frame acquisition plans compatible with the complex guidance were developed. These plans were briefed to industry in early August.

Following the industry briefing, there was increasing concern by some Navy oversight managers about the program's ability to meet the 1984 Congressionally mandated IOC. The Naval Air System Command convened a Board to consider what options were available for meeting the 1984 date. Representatives of the Board includes members from the Office of the Assistant Secretary of the Navy for Research, Engineer and Systems; Office of the Chief of Naval Operations; the Naval Air Systems Command and the Naval Weapon Center, China Lake. Alternative weapon systems, e.g., HARPOON and TOMAHAWK were identified by the Board as possible near-term JMRASM to meet the 1984 date. HARPOON and the proposed TOMAHAWK configuration were unacceptable to the Air Force. As a result, uncertainty as to a near-term program to satisfy the Congressionally mandated 1984 production date continues. Regardless of what decisions are made relative to the near-term, there appears to be a consensus that JMRASM will be developed to meet the long-term program objectives.

FY-80 funding to support JMRASM has been deferred pending a decision on the interim program. Recognizing the delays and possible redirection of the acquisition program for the near-term, the program office has intensified its emphasis on continuation of the technology program.

As currently defined, the technology oriented program provides for development and demonstration of technological

concepts which could improve the combat utility of air-to-surface missile systems. The thrust of this effort is to demonstrate the feasibility of developing a viable weapon system which offers increased performance and survivability in future hostile environments.

The remainder of this report details the findings and recommendations of the study. It should be noted that the major portion of the study deals with the major system acquisition aspects of the program. However, during the latter stages of the study technology re-emerged as a significant effort. Even though most of the study effort dealt with analysis of program alternatives and associated model structures, the increased focus now being placed on the technology efforts should be recognized. Toward that end a special section of this report annotated "Current Status" is devoted to the planned technology effort.

REPORT SYNOPSIS

From the outset of the study it was apparent that an overall approach to develop and acquire a JMRASM must be formalized and documented for the project manager to effectively control program execution. As a first step, the project office had to develop plans consistent with the Congressional and OSD guidance. To do this several factors had to be considered before top level plans could be developed.

Experience from other development programs indicates that, from completion of concept formulation, it typically takes 2-3 years for missile validation (advance development), 3-4 years for a full scale development (FSD), and a minimum of one year for operational test and evaluation. Using these time frames as a yardstick, it appears that to have a production capability by 1984 would involve significant schedule risks unless some concurrency between validation and FSD were allowed.

In view of the risks involved with the traditional development approach, the project office considered it prudent to continue the ongoing governmental technology effort as a back-up approach. It was, therefore, decided that the management approach would be to proceed on a dual axis. Industry would continue with its concept formulation efforts while the government expanded its technology efforts to include critical experiments in guidance and other risk areas. These two axis would converge at about the time validation begins. (Tentatively the end of 1980)

Within this general management scheme, it was necessary to identify those specific actions required to ensure successful accomplishment of the project goals. There were two basic orientations to the identified actions. First, there were those actions required by policy, regulations and directives for any major acquisition. They included the development of an acquisition strategy, source selection procedures, procurement plans, etc. Secondly, and of equal importance, were those actions designed to provide information to members of the acquisition community involved with program oversight as well as those involved with system development and design. In this regard JMRASM briefings were presented to industry and the Navy chain of command.

On 2 August 1979, industry representatives were briefed on the JMRASM acquisition plan and on 15 August the Naval Air Systems Deputy Commander for Plans and Programs (NAVAIR 01) was briefed on the status of the project. The MAL recommended inputs for both briefings are included as Appendices A and B, respectively. The acquisition plan presented called for early involvement of industry to conduct concept formulation studies. The field of competition was to be reduced as rapidly as possible in order to both meet the directed accelerated schedule and conserve resources. The technology base effort would continue with the derived data provided to industry as it became available.

To comply with the regulatory requirements, MAL provided the project manager a series of recommended inputs and models to document the acquisition planning of the JMRASM project. These inputs reflect the considered opinion of MAL after a careful analysis of the technical alternatives and assessment of the feasible management approaches. These inputs are attached in chronological sequence at Appendices C - K. These inputs followed a logical order from identifying the program events necessary to seek, recognize and select qualified industry participants to submission of a suggested model for these activities.

To identify the significant events and responsibile agencies associated with selecting qualified industry participants, an outline of necessary actions with corresponding responsibilities to support JMRASM was developed and is contained in Appendix C.

Prior to devloping a formal plan, MAL submitted issues and other factors for project office consideration in developing its procurement plan. This submission contained a model plan of actions and milestones document and provided suggested parameters for subsequent planning and documentation.

The highlights of a proposed procurement approach, (Appendix E), provided the project manager a tentative schedule and identified several factors for consideration in developing

selected sections of the Request for Quotation (Information) (RFQUI) and the Request for Proposal (RFP). Based upon comments of the project manager, MAL submitted additional consideration for use in developing the RFQI (Appendix F).

With the majority of the informal planning completed, MAL submitted, in rapid succession, a series of suggested revisions to the program model structure under a Model Source Selection Plan, (Appendix G), Model Procurement Plan and Revision (Appendices H and I), Model Procurement Plan for Critical Technology Development (Appendix J); and a Model Procurement Request for Concept Development (Appendix K).

CURRENT STATUS

As shown in Appendix L, the JMRASM system acquisition program has been slowed and the continuation of the technology effort emphasized. The main thrust of the current technology effort is oriented toward technological development within the Navy laboratory system and initiation of efforts to expand industrial involvement.

Support of the technology base will continue for the foreseeable future even if the JMRASM system acquisition is delayed. In the event system development funding is provided in FY-80, up to $30 million, a skeletal acquisition program structure is being maintained to permit a surge in the program leading to early development of a complete weapons system.

The FY-79 program is on schedule and within the budget. Specific milestones to support the activities in Figure 1 to Appendix L are now being identified. Accomplishment of these milestones is essential to the smooth execution of the program.

Although signficant progress has been made in acquisition planning, much work remains to be done. The proposed procurement plan, RFQ (I) and other documents developed over the past few months were preliminary efforts based upon an embryonic acquisition strategy which needs to be finalized. Required work which has yet to be accomplished includes development of: A formal acquisition strategy, a program master plan, a program technical plan, a resource control/tracking plan, and a management information flow process to support the program.

These actions coupled with a detailed milestone schedule of all critical tasks are essential to the effective and efficient evolution of JMRASM.

RECOMMENDATIONS

In order for the JMRASM program to move ahead either as a technology effort with an objective to evolve into a major system acquisition in the 1982 time frame or as a major system action within FY-80, the program should take steps now to build the foundation upon which the program can evolve. Toward that end the following recommendations are submitted.

A. Formal and informal sponsors within the Navy should be identified and cultivated. Development of sponsors within various levels of the Navy will greatly facilitate program execution and minimize the costly delays which have recently plagued the program.

B. Within resources currently available, the effort to identify management alternatives and develop a formal acquisition strategy with documentation should be pursued. The development of management alternatives should include a means of identifying and analyzing the management information available. This analysis, in addition to providing current status, must accurately forecast program execution in time to allow the project manager to make program adjustments in a timely manner.

C. Information required for the POM 82 budget hearings scheduled should be developed immediately. This preparation should draw heavily on the information and analysis performed as a result of the above

recommendations and previous testimony to the Congress.

D. The project manager should begin an early effort to assess the implication of joint service acquisition and deployment. Such an assessment should address not only technical requirements but also any differences in program management approach between the services and how differences can be reconciled leading to an appropriately integrated project.

APPENDIX A

ACQUISITION PLANNING

ACQUISITION PLANNING

I would now like to turn our attention to acquisition planning. Over the next 10-15 minutes I would like to tell you where we are in developing our acquistion plans, what problems we have and give you some insight into some of the factors that will impact our planning as the program moves forward.

First, so that you will understand what guidance and constraints have affected our planning thus far, I want to briefly give you the chronology of events which has shaped the planning up to this point. Some of these points have been mentioned earlier. My purpose in repeating them is so that you can see how they fit in the sequence of events that have influenced the program to date.

- The Navy, as Ed Gravelin indicated earlier, issued an operational requirement in May 1978. This action initiated a development proposal -- at that time, it was the first formal step for the Naval Material Command in the acquisition process.

- The MRASM Program was a new start in the FY-79 Budget. That is, it first appeared as separate budget line item in the advance development buget.

- Congress in the FY-79 Authorization Committee Conference Report approved funds (approximately $5.5 million) contingent upon a three-year development program.

- The FY-79 Senate Appropriation Committee required a Mission Element Need Statement before a program start.

- The FY-79 Appropriations Committee Conference Report approved the funding with the stipulation that the program be jointly funded and carried out with the Air Force so that a single weapon, suitable for both services, would be developed.

- OSD directed that none of the FY-79 funds could be used until they (OSD) reviewed and approved a joint missile study to harmonize requirements and investigate the feasibility of a common Navy/Air Force missile. This study is now in progress.

- An OMB review of the program led to OSD direction that the acquisition conform to OMB circular A-109 policies -- as an aside, when I use the term "acquisition" I mean process of acquiring military hardward which includes the design, development, and procurement of equipment or systems.

- A draft Joint Service Operational Requirement (JSOR) was circulated in December 1978.

- During the FY-80 budget hearings in Congress, the House Armed Services Committee increased the request to $30 million and stipulated that the program must have a production capability by 3 December 1984.

Given the events I have just mentioned, those of you who have been following the program know the difficulties I face. The earlier speakers discussed the threat, the need, and the technology. It is my job to meld or integrate all of these factors into a viable acquisition program which will, in the end, produce a high performance missile which is survivable against the threats of the 1980's and 1990's.

The basic acquisition strategy I hope to follow is to involve industry, on a competitive basis, at the front end and narrow the field of competitors as rapidly as possible. To do this, my plans are to solicit proposals from industry to conduct concept formulation studies. It is important to note these proposals (or bids) are not a submission of concepts but rather the offerer's proposed study approach or how he intends to conduct his concept formulation efforts. While the criteria for selection of the study phase contractor(s) has not been finalized, it is thought at this time we will evaluate the proposals on the contractor(s) understanding of the total requirements and the merit of his proposed technical approach for the conduct of the study. I must point out, however, the criteria has not been finalized and may be changed prior to the issuance of the RFP.

It is anticipated that multiple awards will be made to the successful offerors. It is hoped that at least as many as six contractors will have proposals of sufficient merit to warrant award of a contract. Successful contractors will be required to implement their proposed study approach. The purpose of the concept formulation study is to develop a medium range air-to-surface missile concept giving consideration to military worth, cost, and risk. From these concepts, it is hoped that one or more can be selected for validation.

The schedule is probably the area of most uncertainty at this time. I would like to be able to give you definitized schedule with decision points clearly delineated today. Unfortunately, I cannot. Right now there are two dates that are driving my planning -- December 1984 and a requirement for a briefing to OSD in early 1980, probably February. If the 1984 date for interim capability stands, then we must consider concurrency, and even then it will be difficult to meet that date. We will be interested to see how you, industry, view this date. Obviously, trade-offs in schedule should be considered where benefits to both contractor and the Government can be offered. If the argument is sufficiently convincing and worthwhile, then I would give consideration to trying to get relief from the 1984 date. Please note I said "give consideration" and "trying to get relief".

The OSD date for a program review to consider the various concepts being offered is February/March 1980 timeframe. This may necessitate some type of phasing in the concept formulation studies. We are currently considering how best to meet the requirements. In any event, the necessary stipulations or schedule milestones will be contained in the request for proposal.

Another factor which effects the development is the parallel or complementary technology effort. As Ed Gravelin pointed out, we have been developing a part of the technology over the last few years from which a new high performance, survivable missile could be developed. This technology was being pursued not only because of the need to maintain a sound technology base, but also, because it appeared that there was a possibility that current weaponry could not meet the future threat. The information we have developed thus far will be available, but, obviously, we cannot provide data from the planned future critical experiments until they are completed. We also hope that you will, in your concept formulation studies, let us know of any other applicable technologies that might be available.

I would now like to spend just a few minutes to give you some insight or a better perspective of what we are looking for in the study proposal. I mentioned earlier that the proposal would ask you for your understanding of the requirement. Briefly, what I meant (and this will be reflected in the request for proposal) is that in the technical section we would ask you to discuss your understanding of such things as the functional capabilities or performance and requirements boundary condition of a missile to meet the threat; the trade-off and analysis in performance, cost and schedule; technology and risk; reliability, maintainability, and availability; integration; modularity; growth; cost considerations, such as life cycle cost, design to cost, cost estimation methodology, etc.; operational environment; and testing for both Navy and Air Force use.

It is presently planned to solicit as part of the proposal the description of your study approach. In this area, we would ask you to discuss such things as your approach to developing a conceptual missile; how cost consideration will be handled; how system engineering will be applied; how you intend to manage the study effort; and how you intend to manage the study effort; and how you would transition from the conceptual design into validation.

The last big factor in the solicitation for the concept studies would be a discusssion of your management, resources and experience. Here we will be looking for how you are organized; how you would control the development effort (not just the study, but control throughout the complete development); what resources and facilities (including test and production) you have available; and your experience level (both corporate and personnel).

I hope the preceding will give you some insight into how we plan to structure the solicitation. Now to give you some perspective of the requirements which will form the basis for the concept formulation effort is Mr. Joe Seibolt from the Naval Weapons Center, China Lake. Joe will give you a quick preview of some of the goals and thresholds that are evolving as the joint missile requirements study proceeds. I would like to point out that the information provided should be viewed as typical data and may or may not be the same as that finally approved in the Request for Proposal.

APPENDIX B

JOINT MEDIUM RANGE AIR TO SURFACE MISSILE (JMRASM)

ACQUISITION PLANNING

JOINT MEDIUM RANGE AIR TO SURFACE MISSILE (JMRASM) ACQUISITION PLANNING

The Joint Medium Range Air-to-Surface Missile (JMRASM) Acquisition plans are being driven by two dates:

February 1980

December 1984

The first date, February 1980, is a date established by DDR&E and makes the use of the FY-80 JMRASM funds contingent upon the identification of missile concepts by then. The second date, December 1984, has been established by the House Armed Services Committee (HASC) and, if it stands as a part of the FY-80 budget, will require that a production capability be established by 31 December 1984.

In addition to the two dates, Congress has mandated that MRASM be a joint program with the Air Force and a Missile Element Need statement be developed. As a result, DDR&E has directed the JMRASM acquisition be conducted in accordance with OMB Circular A-109. This requires that JMRASM program involve industry on a competitive basis at the beginning of the program (concept formulation) and continue competition as long as it is beneficial.

Structuring an acquisition plan to meet the intent of the Congressional and OSD guidance has not been an easy task. Experience from other development programs indicates that from completion of concept formulation it typically takes from 2-3

years for a missile validation (advanced development) effort, 3-4 years for a full scale development (FSD), and a minimum of one year for operational test and evaluation. Using these times as a yardstick, it appears that to have a production capability by December 1984 would be very difficult unless some overlap between validation and FSD (concurrency) is allowed. Of course, competition, if carried through validation, will tend to reduce the schedule risk and make concurrency more acceptable. The project cannot assess the soundness of this (concurrency) until industry proposals are in hand and evaluated. On the other hand, the on-going technology efforts could be evolved into an acquisition which could, in all probability, meet the 1984 date.

In view of the fact that following the traditional development phases in consonance with OSD guidance makes the development cycle too long to meet a 1984 production capability and that much of the risk of a compressed schedule cannot be assessed until industry proposals are received, the project office believes that the on-going technology effort should be continued in parallel with concept formulation. Additionally, this continuing technology effort will be expanded to cover guidance and other critical aspects necessary for designing and developing a high performance, highly survivable missile.

Based on the above rationale, the JMRASM program has developed a two faceted approach. One facet is to initiate a competitive concept formulation effort which could lead to the validation of one or more concepts. The other facet is to continue the expanded, on-going technology effort (critical experiments) through NAVAIR-03P22.

This technology effort can also be evolved into a validation effort, if necessary. Both approaches will be conducted in parallel, at least, until commencement of validation. Continuation of all or a part of the technology effort after the start of validation will be dependent on the competitive process which will determine the MRASM concepts to be validated. Thus, current plans will bring the two approaches back together at about the time validation begins. Of course, this will be dependent on the merit of the concepts developed and proposed in the competitive concept formulation effort.

It is planned to enter validation (advanced development) with at least two competing JMRASM concepts to develop. However, the merit of the proposed concepts and availability of funding may dictate otherwise. Another factor affecting validation is the time available for it if the 1984 production capability remains a requirement. If the 1984 date stands, then it will be necessary to shorten validation or else overlap the validation effort with the full scale development (FSD) effort. It is felt that the competition afforded by two or more validation efforts, if carried through until it is necessary to initiate FSD, will reduce cost and schedule risk to an acceptable level. This permits shortening the validation phase and, in all probability, will also have a salutary effect on the time required for FSD. Given the compressed schedule, it is planned to shorten validation by carrying two competing validation efforts.

The need to establish a production capability by December 1984 will require that full scale development (FSD) start as soon as possible. FSD could be shortened by carrying two competing missiles designs in FSD, but the cost to do this is felt to be prohibitive. Thus, it is planned to carry only one contractor (one design) through full scale or engineering development and it appears that FSD should start in early 1982. This would permit pilot production to start in late 1984 and a DSARC III decision in December 1984.

To implement the above plans, a solicitation to industry will be made as soon as possible, perhaps as early as September 1979. It is intended that as many as six small study contracts, of approximately $50K each, will be awarded for the purposes of developing preliminary JMRASM concepts. The awards would be to companies that have the potential to be a JMRASM prime contractor. It is hoped that these small study contracts can be awarded in time to permit the results to be used for the February/March 1980 OSD briefs. From these preliminary concepts, it is planned to select as many as four for further definition. It is anticipated that four follow-on study contracts, in the neighborhood of $200K each, will be awarded for a 4-6 month effort to conduct additional trade-offs, refine the preliminary concepts, and develop validation proposals. From these concepts, current plans are to select the two that have the most merit and award validation contracts. Of course, if none of the concepts are worthy, no

validation contracts will be awarded. It is considered highly unlikely that all of industry's proposed concepts would be unacceptable. Thus, there is high confidence that the competitive process will result in at least two suitable concepts for validation. The continuing technology effort will assure there is at least one concept available.

Looking ahead to FSD the necessary guidance and decision points will be identified in the validation phase contracts to permit the competing contractors to develop a proposal for FSD. On the Government side, the criteria and ground rules for the selection of an FSD contractor will be developed and available on or about the time the validation phase contract(s) is(are) awarded. FSD will follow the usual engineering development phases of completing design work, building and testing of production models, production engineering, etc. As indicated earlier, current plans are for DSARC III in December 1984.

The schedule and plans discussed above are very ambitious. They depend on adequate funding and timely program decisions required from decision authorities outside the program office. No doubt changes will occur as the solicitation and source selection plans are finalized and documented. The strategy and actions discussed in this paper should be considered as the first step in an evolving process which describe the plans and activities necessary to implement the JMRASM acquisition.

APPENDIX C

SOURCE SELECTION

PROCEDURES

SOURCE SELECTION

PROCEDURES

EVENT	ACTION	RESPONSIBILITY
Appoint Source Selection Authority (SSA)	Select candidate	PM
	Prepare appointing letter	PM
	Appoint SSA	SECNAV
Appoint Source Selection Authority Committee (SSAC)	CHAIRMAN	
	Select candidate	
	Prepare appointing letter	PM
	Appoint Chairman	SSA
	MEMBERSHIP	
	Prepare membership requests	PM
	Prepare appointing letter	PM
	Appoint members	SSA
	Submit Financial Statements	Each Member
Appoint Source Selection Evaluation Board (SSEB)	CHAIRMAN	
	Select candidate	PM/SSAC CHMN
	Prepare appointing letter	PM
	Appoint SSEB Chairman	SSAC CHMN
	MEMBERSHIP	PM/SSEB CHMN
	Prepare requesting letters	PM/SSEB CHMN
	Prepare appointing letters and instructions	PM/SSEB CHMN SSAC Concur
	Submit Financial Statements	Each Member
Publish Source Selection Plan (SSP)	Determine tentative eval. criteria	PM
	Draft SSP	PM
	Review SSP	SSAC
	Approve proposed criteria	SSAC
	Approve SSP	SSA
Publish Procurement Plan (PP)	Draft PP	PM
	Review and approve PP	NAVMAT
	Request Authority to Negotiate Determination & findings (RAN/D & F)	AIR-02
	Review RAN D & F	ASN (MRA & L) or ASN (RE & S)

SOURCE SELECTION

PROCEDURES

EVENT	ACTION	RESPONSIBILITY
Publish Request for Proposal (RFP) (for Technology and Small Contract)	Draft RFP Review RFP RFP approved Issue RFP	PM NAVAIR NAVMAT NAVAIR-02
Publish Request for Proposal (RFP) (for Major System Acquisition)	Draft RFP Review RFP RFP approved Issue RFP	PM SSEB SSAC NAVAIR-02
Select Contractor	Prepare Bids Proposal received Evaluate Prepare report to SSAC Business clearance Discussions	Industry SSEB SSEB CHMN SSEB and SSEB Contracting Officer (C.O.) C.O. and Project Officer
	Best and finals Negotiations Evaluate Final report to SSAC Business Clearance SSAC report to SSA	Industry Govt. and Industry Teams SSEB CHMN SSEB C.O. CHMN SSEB and SSAC
	Selection	SSA

APPENDIX D

PROGRAM OFFICE CONSIDERATIONS

IN PREPARATION OF THE PROCUREMENT PLAN

PROGRAM OFFICE CONSIDERATIONS IN PREPARATION OF THE PROCUREMENT PLAN

NAVAIR Instruction 4200.22D contains explicit instructions regarding procurement plan content, source of inputs, concurrences and approval levels. Key items for attention include:

1. The dollar level dictating the need for a formal procurement plan and the level at which it must be approved relate to "estimated" cost thresholds (not approved--or even submitted--budget levels). The JMRASM procurement plan must go to the NAVMAT level for approval.

2. Other divisions of NAVAIR must be formally involved in the preparation of procurement plans regarding content and concurrence in their functional areas. For example, AIR 05 is responsible for schedules, cost estimates and requirements for reliability and maintainability; AIR 04 is to provide input on integrated logistics and life-cycle cost considerations; AIR 08 must ensure budget compatibility; etc.

3. Each program can have its own dedicated special procurement council. The option for such a council and assistance to be expected therefrom is covered in NAVAIR Inst. 4200.22D. Each procurement plan is also subject to review by the NAVAIR Acquisition *Program Review Board*, pursuant to NAVAIR Instruction 5420.27.

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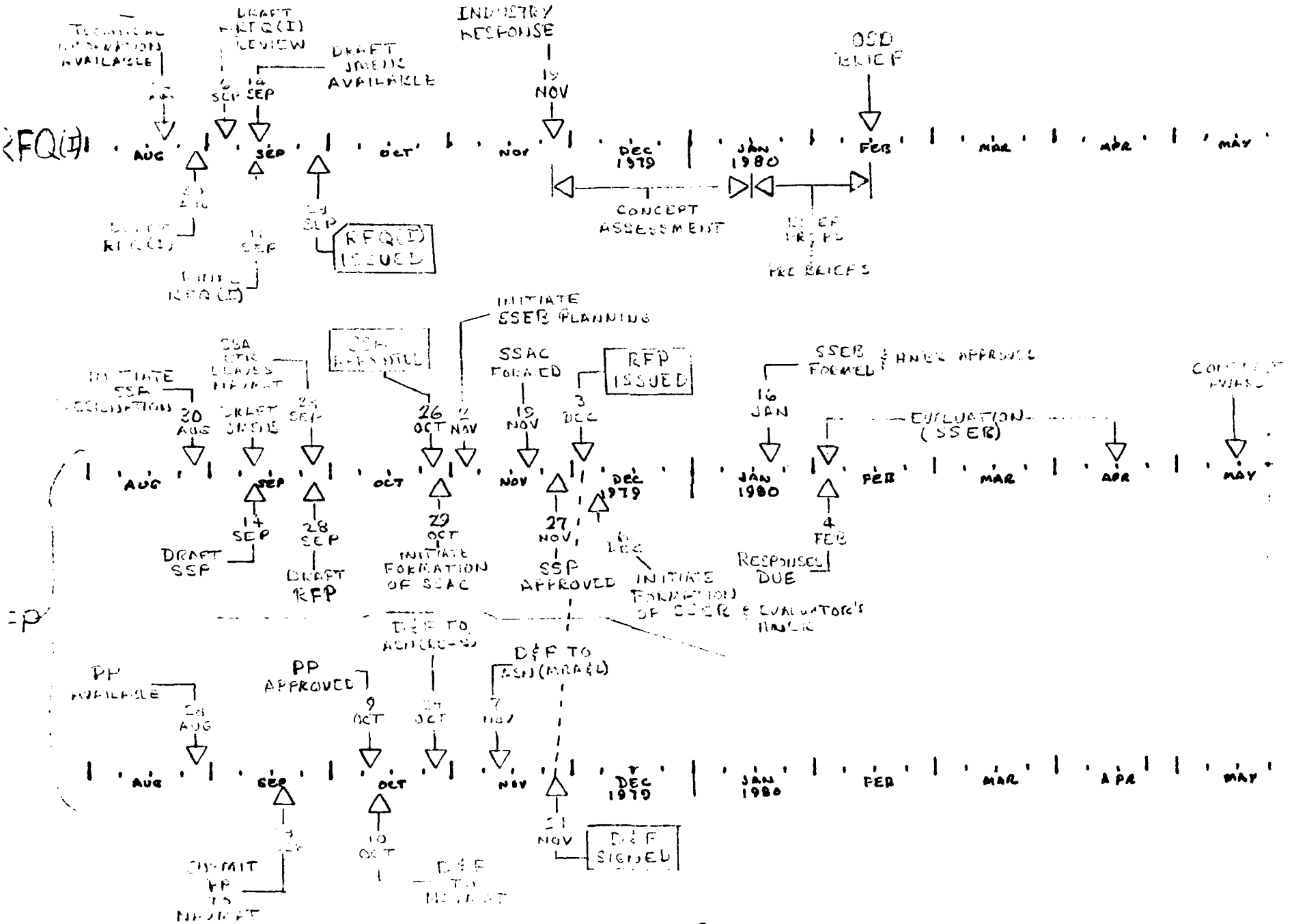

APPENDIX E

JMRASM PROGRAM

30 AUGUST 1979 PLANNING MEETING

JMRASM PROGRAM

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30 AUGUST 1979 PLANNING MEETING

OBJECTIVE

DISCUSS, CLARIFY AND DOCUMENT OVERALL PROGRAM ACQUISITION STRATEGY, SCHEDULE, ACTION ITEMS AND RESPONSIBILITIES.

ORDER OF DISCUSSION

- OVERALL ACQUISITION PLANNING
- RFQ(I) HIGHLIGHTS
- RFP HIGHLIGHTS
- PROPOSED ACTIONS/RESPONSIBILITIES
- OTHER

PROCUREMENT APPROACH HIGHLIGHTS

I. RFQ(I)

A. PURPOSE: Obtain (unfunded) preliminary concepts from interested industry sources for use in briefing OSD in early 1980.

B. ISSUANCE APPROVAL: NAVAIR 02

C. SCHEDULE: 1. Issue 1 Oct 79
2. Responses due 1 Dec 79

D. SELECTED CONTENT REQUIREMENTS:

1. Technical

a. Technical parameters (as of 9/1/79)
b. Desired technical information
c. Draft JMENS attached

2. Programmatic

a. Structure of response
b. Acquisition planning. This planning must:

(1) State that only firms which have production capability and experience as primes in major weapons system development programs will be considered as candidate JMRASM development and production contractors.

(2) State that an RFP is planned to be issued in the December time frame which:

(a) restricts response to RFQ(I) participants

(b) requests proposals to complete concept development effort and develop a validation phase proposal

(c) contemplates award of contracts to RFQ(I) participants who submit proposals in response to the RFP

(d) contains specific validation phase proposal requirements with companion selection criteria

I. RFQ(I) (continued)

(e) contemplates receipt of the responses to the RFP within 15 days

(f) requests industry's suggestion relative to time required to complete the contractual effort (concept development)

(3) Reflect that RFQ(I) response information may be used in the RFP.

II. RFP

A. PURPOSE: Obtain validation proposals.

B. RFP ISSUANCE APPROVAL:
1. Procurement plan
2. D&F
3. SSA, SSAC, SSEB
4. SSP
5. A.F. concurrence

C. SCHEDULE:
1. Issue 3 Dec 79
2. Responses due 15 days after issue
3. Contract award anticipated to be shortly after the OSD Briefing

D. *SELECTED CONTENT REQUIREMENTS*:

1. Technical

a. Draft JMENS as of 12/1/79
b. Technical parameters as of 12/1/79
c. Technical aspects of validation contract award selection criteria

2. Programmatic

a. Acquisition strategy

(1) Validation Phase contractors (2 anticipated) will be selected from concept Development contractors based on selection criteria contained in the Concept Refinement Phase contract.

b. Business/management aspects of validation contract award selection criteria.

II. RFP (continued)

D. RFP RESPONSE:
1. Concepts developed for RFQ(I)
2. Proposal for concept(s) development

E. CONTRACT DELIVERABLES:
1. Refined concept(s)
2. Firm proposal for Validation Phase

APPENDIX F

MODEL REQUEST FOR QUOTATION FOR INFORMATION

REQUEST FOR QUOTATION FOR INFORMATION FOR THE
DEVELOPMENT OF A MEDIUM-RANGE AIR-TO-SURFACE MISSILE (MRASM)

1. The Navy and the Air Force are interested in developing a medium-range air-to-surface missile (MRASM) as described in subsequent sections of this RFQ(I).

2. The purpose of this Request for Quotations for Information (RFQ/I) is to solicit industry's concepts for a medium-range air-to-surface missile which will satisfy the draft Joint Mission Element Need Statement (JMENS). The JMENS is attached as Appendix _ of this RFQ(I).

The design concepts will be used by the government to assess the state-of-the-art resident within industry and the viability of industry's concepts, capabilities, and readiness to satisfy the JMRASM requirements. In addition, the concepts will assist the government in identifying critical technology areas, program risk areas, and initial cost estimates attendant to the formalized JMRASM acquisition.

3. In order to maximize contractor contribution and innovation, informational responses to this solicitation are sought from a substantial number of companies which have an interest in and are capable of designing, testing and producing a stand-off missile of the type to meet the requirements specified in this RFQ(I). Offerors may submit independent or joint responses. Responses are requested at the system level rather than at the subsystem level.

4. It is intended to issue an RFP in the December timeframe which will solicit proposals for a short, funded concept development effort. While it is recognized that failure to submit a response to this RFQ(I) will not prejudice a firm's right to respond to the RFP, it is anticipated that responding to this RFQ(I) will enhance a company's ability to respond to the RFP.

5. The Naval Air Systems Command (NAVAIRSYSCOM) desires that information flow freely between government and industry during the RFQ/I response period. Since the RFQ/I does not constitute a competitive procurement, exchange of view between NAVAIRSYSCOM functional codes and their industrial counterparts is encouraged.

6. The RFQ/I should be regarded as the controlling document. Any information, views or advice conflicting with the terms of the RFQ/I or covering topics not dealt with in the RFQ/I that is imparted to any concern from a governmental source should be reported to the Contracting Officer, AIR-21621. The RFQ/I terms will prevail over such information, views or advice until such time as the RFQ/I is modified with respect to such matters.

The point of contact for all matters arising during the RFQ/I response period is the Contracting Officer, AIR-21621.

7. This RFQ/I contains the following parts:

8. To the extent that any participant wishes to restrict any of the information submitted in response to this RFQ/I, the title page of each response or other data furnished shall be marked with the following legend:

This data shall not be disclosed outside the government and shall not be duplicated, used, or disclosed in whole or in part for any purpose other than for (a) assessing the feasibility of a medium-range air-to-surface missile, and (b) revising, as a result of such assessment, without divulging such data, statements of operational capability. Such statements are hereby authorized to be incorporated in ensuing solicitations, contracts or other documents. However, if a contract is awarded to (offeror's name) in connection with submission of this data, the government shall have the right to duplicate, use, or disclose this data to the extent provided in the contract. This restriction does not limit the government's right to use information contained in the data if it is obtained from another source without restriction. The data subject to this restriction is contained in sheets (pages) .....

9. The government's intention not to award a contract on the basis of this RFQ/I, or otherwise to pay for the information solicited, does not prohibit the allowance, in accordance with the Armed Services Procurement Regulation 15-205.3, of the cost of preparing such information under government contracts.

I. BACKGROUND AND OPERATIONAL NEEDS

1.1 Background

The basic concept of the medium-range air-to-surface missile has existed in Navy advance planning for many years. Navy action on this concept was formalized in 1967 with the decision to initiate a funded technology program to produce a system technology prototype of an advanced tactical standoff missile. Parallel development of propulsion, guidance and other subsystem technologies conducted by the Air Force, industry and other countries have also contributed to the current technology base on which JMRASM concepts can be formulated and system designs developed.

Formalization of JMRASM as a major weapons system procurement has gained impetus in recent months. Several events contributing to this increased emphasis are:

a. Based on an earlier draft Joint-Specific Operational Requirement (JSOR), a draft Joint Mission Element Need Statement (JMENS) was generated for review in December 1978.

b. The Undersecretary of Defense for Research and Engineering (USDR&E) signed a memorandum on 20 April 1979 requesting that a study be initiated to examine the needs, operational requirements, development alternatives, cost and effectiveness of adding a medium-range air-to-surface missile to aircraft weapon suites for joint Navy/Air Force strike missions.

c. In June 1979 OPNAV briefed the Navy/Air Force Joint Requirements and Development Committee (JRDC) on the progress of the JMRASM operational/technical study. A JMRASM Steering Group was subsequently established by the JRDC to determine JMRASM system requirements and produce an updated JMENS.

d. During the FY80 budget hearings in Congress, the House Armed Services Committee gave indication of congressional interest in this program by increasing the Navy FY80 budget request to over $30 million and stipulated that the program must have an initial production capability by 31 December 1984.

e. The Navy has been designated as the Executive Service for the JMRASM program. In recognition thereof, Naval Air Systems Command has established a program office for MRASM advanced development, in anticipation of the JMENS approval and formalization of JMRASM as a major weapon system program. The Naval Weapons Center (NWC) at China Lake is the primary laboratory for technical assessment support to NAVAIR.

f. A briefing will be made to USDR&E by the JMRASM Steering Group in the January-February 1980 time frame. The outcome of this briefing is expected to result in approval to proceed with concept development and validation phases.

In view of the pending approval of JMRASM as a major weapon system acquisition, procurement for this program appears to be certain. The degree of acceleration in the acquisition process to meet a 1986 or earlier data for an initial production capability is not yet defined, but procurement must be initiated now for the early phases, independent of the ultimate overall program acquisition schedule. The preliminary program plan is reflected in Figure I-1.

1.2 Program Acquisition Planning

Current Joint Medium-Range Surface-to-Air Missile System (JMRASM) planning is being developed around two key dates;

February 1980

December 1984

The first date, February 1980, has been established by the Undersecretary of Defense for Research and Engineering (OUSDR&E) for an OUSDR&E program review. The purpose of the review is to consider industry's understanding of the JMRASM requirements and industry's ability to satisfy those requirements (both technical and production capabilities) as prerequisite to the approval of the JMRASM FY-80 program plans.

The second date, December 1984, has been established by the House of Representatives in the legislative action on the Fiscal Year 1980 Authorization Bill. If this date stands as a part of the FY-80 budget, it will require that a JMRASM initial production capability be established by 31 December 1984.

To meet these dates, a phased development program is planned--concept development, validation of concepts, full-scale development and production. It is planned that multiple contract awards will be made for concept development. This will be followed by the validation phase in which the competitive validation of candidate designs by one or more contractors

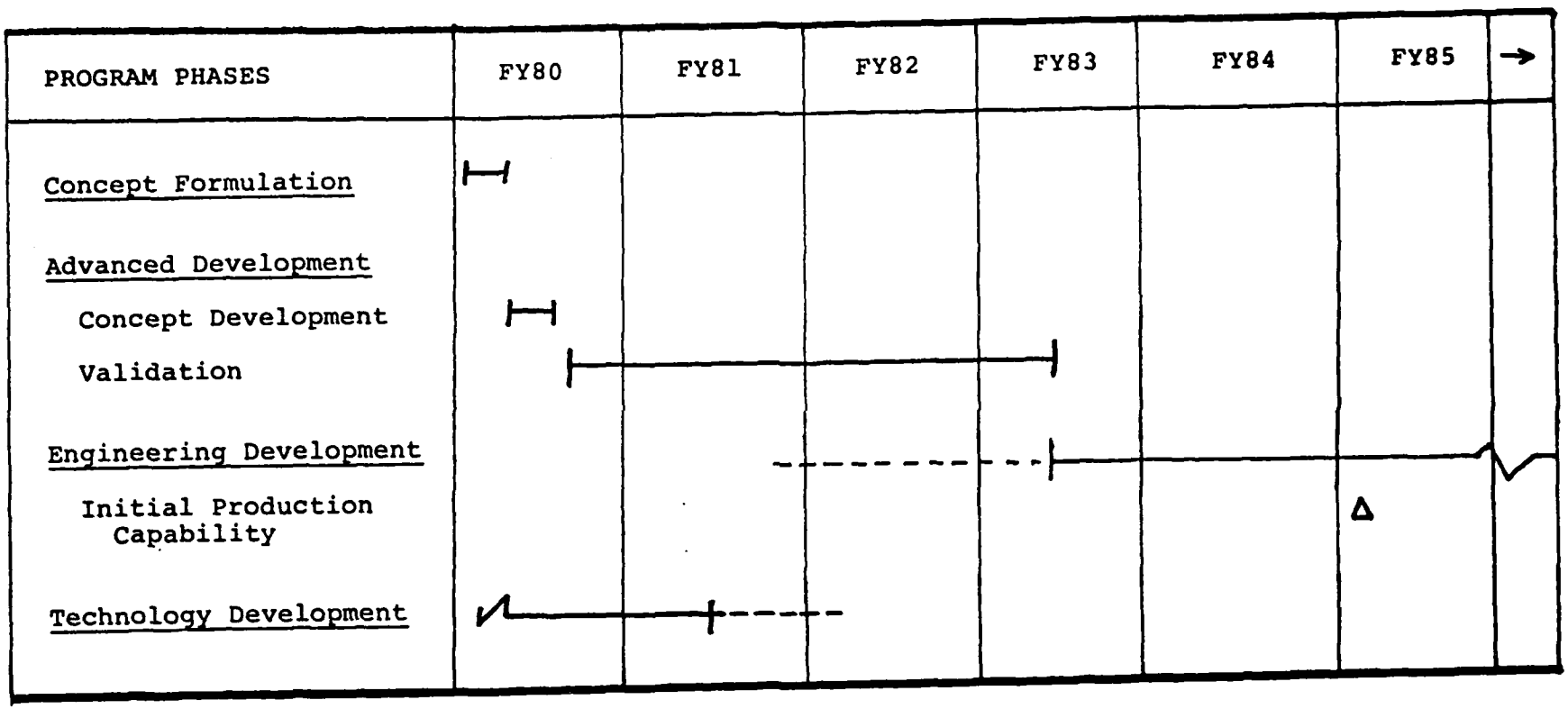
is planned. On completion of validation, it is anticipated that full-scale development will be undertaken leading to a limited production capability by December 1984. The preliminary program plan is provided in Figure I-1.

To initiate the concept development phase, a three-part "program initiation" effort has been undertaken. An overview of the three-part "program initiation" for concept is shown in Figure I-2. Each part--Concept Formulation, System Development, and Technology Development--will be discussed below.

1.2.1 Concept Formulation

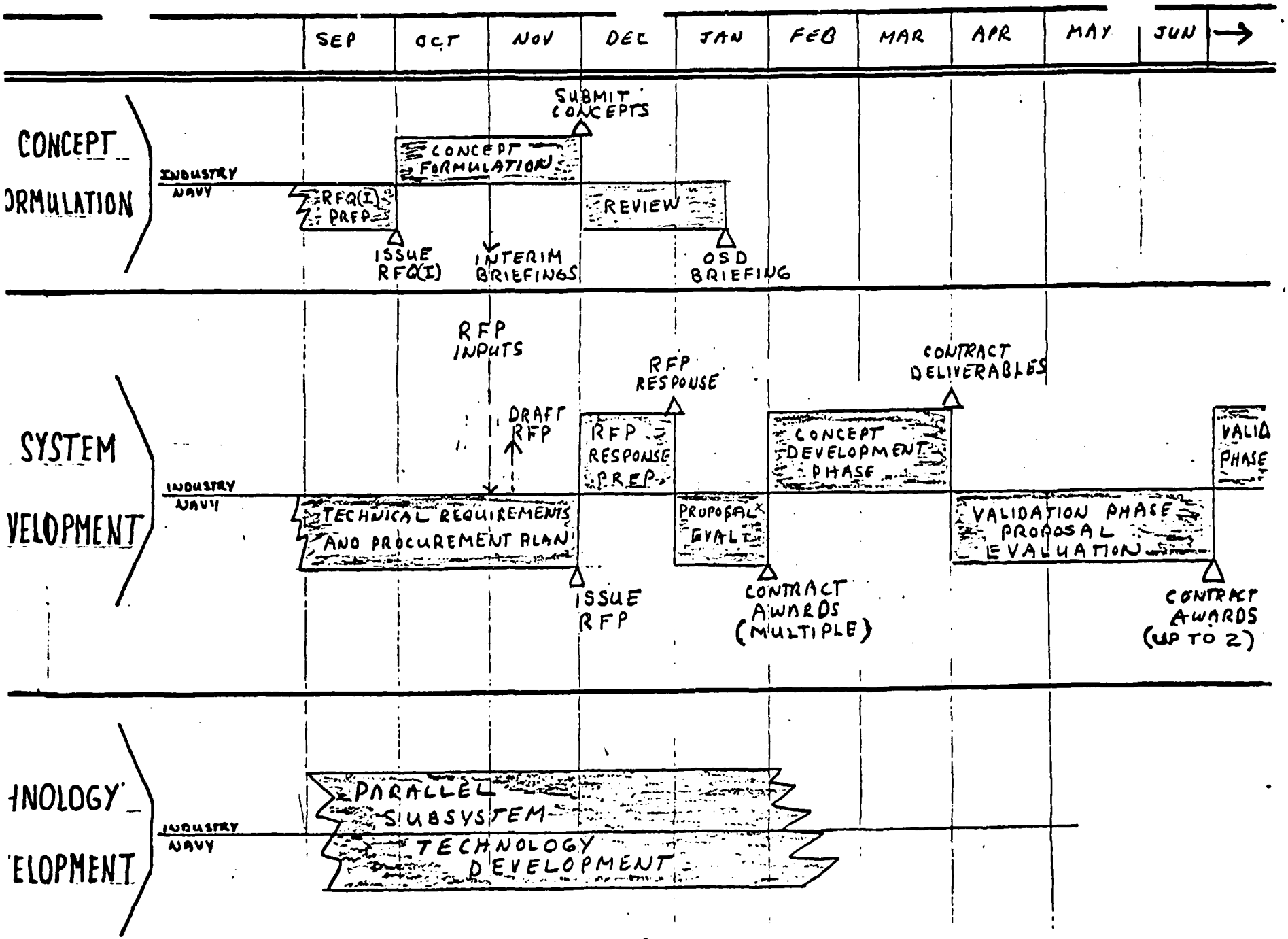
Industry concepts which satisfy the preliminary Joint Mission Element Needs Statement (JMENS) are requested to be formulated and submitted in response to this RFQ(I). These concepts will be used as partial inputs to brief the Office of the Undersecretary of Defense for Research and Engineering (OUSDR&E). To facilitate preparations for this briefing, an interim review of each contractor's concept is being requested approximately 30 days prior to submitting his concept. This interim review, as well as assessment of the concepts submitted, will be conducted by the JMRASM program office with assistance from other government activities and expert consultants as required. Additionally, since OUSDR&E approval is required before the program office can execute its FY-80 plans, it would be advantageous to present the OUSDR&E briefing as early as

JMRASM PROGRAM PLAN



ACQUISITION PRELIMINARY PLANNING

9/12/71



possible. Toward that end, concepts are being requested 60 days after issuance of this RFQ(I), with the view that the OUSDR&E briefing can be given as early as mid-January 1980.

1.2.2 System Development

Current plans are that an RFP will be issued in the December 1979 time frame. It is anticipated that the RFP will solicit industry's proposal for concept development. In particular, it is planned that the prospective bidders will be asked to respond by submitting:

1. current JMRASM concepts formulated for the RFQ(I).
2. a proposal for further development of those concepts including trade-off analysis plans and preparation of the attendant validation phase proposal.

Current planning is to allow approximately 30 days for industry to respond to the RFP. It is anticipated that multiple contracts (approximately 5) will be awarded for the concept development effort. It is currently planned that these multiple contracts will be awarded shortly after the OSD briefing.

Recognizing that the evaluation criteria have not been approved, tentative plans are that concept development contractors will be selected based on their understanding of the government's requirements, the military worth of, and risk associated with, their preliminary concepts, and their experience and industrial capabilities (including testing).

Responders to the RFQ(I) should be aware that information provided may affect the contents of the RFP. Realizing that time is of importance in initiating validation, RFQ(I) responders are requested to comment or suggest what they believe to be an adequate time to 1) develop their conceptual ideas submitted under the RFQ(I) into fully defined concepts for validation and 2) prepare a validation phase proposal.

Validation phase contractor(s) will be selected from the Concept Development contractors. Criteria for selection of the validation contractors may be provided in the RFP but, in any event, will be provided no later than award of Concept Development contracts.

1.2.3 Technology Development

The third part of the program initiation effort is the technology program. Currently the technology efforts sponsored by NAVAIR SYSCOM and the Air Force over the past several years are being continued. The primary focus of these efforts will be critical experiment to reduce technical risk and provide the government with a better understanding of the current state of the art and enhance its ability to evaluate industry proposed concepts. Government owned information developed under these efforts will be made available to offerors.

APPENDIX G

MODEL

JOINT MEDIUM RANGE AIR TO SURFACE MISSILE

SOURCE SELECTION PLAN

MODEL

JOINT MEDIUM RANGE AIR TO SURFACE MISSILE

SOURCE SELECTION PLAN

I. INTRODUCTION

This plan establishes the overall administrative procedures and states the evaluation criteria for awarding multiple contracts for the Concept Development Phase for JMRASM. It also states the preliminary evaluation criteria for the Validation Phase of JMRASM; however, the overall administrative procedures for the Validation Phase will be established at a later time but no later than the date of award of the Concept Development Phase contracts.

The general guidelines of SECNAVINST 5000.1 and NAVMAT Instruction 4200.49 shall be employed during the JMRASM source selection. A separate handbook will be issued by the Chairman of the SSEB in support of this plan containing details on administration, evaluation techniques, and responsibilities within the SSEB. This handbook shall be consistent with this plan.

II. ACQUISITION STRATEGY

A. Background

This Source Selection Plan applies to the acquisition of a joint U.S. Navy and Air Force weapon system currently identified as the Medium-Range Air-to-Surface Missile System (JMRASM) for joint service use.

The JMRASM system is planned to utilize a highly capable missile for high-threat/high-value targets for both land and ocean missions. It will be designed to interface with several primary launch aircraft, such as the Navy A/F-18 and the Air Force F-16, and several secondary aircraft, such as the Navy S-3A and the

Air Force F-15.

The objective of JMRASM program development is a single weapon to fill the needs of both services. The system will be designed to ensure launch platform survivability against assessed threat capabilities in planned mission scenarios, as well as ensure missile penetration and survivability against anticipated defenses. Service-unique constraints may dictate a degree of modularity, such constraints arising from considerations of the operating environment and the primary target spectrum for each service.

The objective of JMRASM program development is a single weapon to fill the needs of both services. The system will be designed to ensure launch platform survivability against assessed threat capabilities in planned mission scenarios, as well as ensure missile penetration and survivability against anticipated defenses. Service-unique constraints may dictate a degree of modularity, such constraints arising from considerations of the operating environment and the primary target spectrum for each service.

The JMRASM is a highly visible program and meets the criteria of a major weapon system program and will be managed in general with the approvals, documentation procedures and requirements attendant thereto.

B. Acquisiton Strategy

Current Joint Medium-Range Surface-to-Air Missile System (JMRASM) planning is being developed around two key dates:

February 1980

December 1984

The first date, February 1980, has been established by the Undersecretary of Defense for Research and Engineering (OUSDR & E)

for an OUSDR & E program review. The purpose of the review is to consider industry's understanding of the JMRASM requirements and industry's ability to satisfy those requirements (both technical and production capabilities) as prerequisite to the approval of the JMRASM FY-80 program plans.

The second date, December 1984, has been established by the House of Representatives in the legislative action on the Fiscal Year 1980 Authorization Bill. If this date stands as a part of the FY-80 budget, it will require that a JMRASM initial production capability be established by 31 December 1984.

To meet these dates, a phased development program is planned -- concept development, validation of concepts, full-scale development and production. It is planned that multiple contract awards will be made for concept development. This will be followed by the validation phase in which the competitive validation of candidate designs by one or more contractors is planned. On completion of validation, it is anticipated that full-scale development will be undertaken leading to a limited production capability by December 1984.

C. Estimated Cost

It is estimated that approximately four (4) fixed price type contracts will be awarded for the Concept Development Phase, at an estimated price of $200,00 to $300,000 each.

For the Validation Phase effort, up to two (2) contracts will be awarded using a cost reimbursement type contract. Estimated cost of each of these contracts will approximate $_____ million.

D. Bidders List

RFP's for the initial JMRASM procurement will be mailed to the 20 companies who were represented at the August 1979 industry

briefing on JMRASM plans. An announcement will also be inserted in the Commerce Business Daily (CBD) advising that the RFP is available and can be requested, such requests to be handled pursuant to DAR paragraph 4-106.

III. SOURCE SELECTION PERSONNEL

A. Source Selection Authority (SSA)

The Source Selection Authority for the JMRASM procurement is COMNAVAIR.

B. Source Selection Advisory Council (SSAC)

This Council is appointed to act as staff advisor to the SSA. The Chairman of the SSAC is _____. Other members are listed below:

_____, will serve as Contract Advisor to the SSAC.

_____, will serve as Legal Advisor to the SSAC.

C. Source Selection Evaluation Board (SSEB)

The SSEB Chairman is Captain Gerald Dougherty, APC-10. The Board will be composed of representatives of functional and technical areas to direct, control, and perform the evaluation of proposals; and to produce summary facts and findings required in the source selection process. The names of the members of this Board will be provided as an appendix at a later date.

_____will serve as legal advisor to the SSEB.

If any appointed individual is forced to withdraw from his respective responsibilities, the SSEB Chairman will nominate an individual with equal qualification to fill the vacancy as soon as possible.

The services and expertise of other personnel may be used on an "as required" basis, as approved by the Chairman of the SSEB, in the evaluation of any particular part of any proposal. Such other personnel shall not be considered members of the SSEB and shall be furnished only that portion of the proposal needed for the question(s) they are called upon to answer. Where feasible, the identity of the offeror(s), as it relates to the material provided, shall not be made known to such personnel.

IV. EVALUATION AND AWARD CRITERIA FOR JMRASM CONCEPT DEVELOPMENT PHASE

A. Considerations Used in Formulating Criteria

1. Contractors will be asked to respond to the RFP by delivering two distinct items:

a. A concept which he proposes will satisfy the JMENS and Technical Parameters for the JMRASM Program.

b. A proposal for taking his proposed concept and developing it under the prospective contract, including the generation of his attendant Validation Phase proposal.

2. The objective is to place a minimum degree of constraint on contractors in their formulation of concepts to satisfy the JMRASM JMENS/Technical Parameters, as long as their concepts are viable (i.e., avoid "point solution" implications to contractors).

3. The only system cost considerations at this stage will

be the requirement for contractors to project the total system cost which would result from development of their concept into an operational system, a cost/benefit estimate based on the projected total system cost, and cost methodology and approaches they will employ during the Concept Development Phase.

4. Contractors will also be asked to describe their planned approach to the Concept Development Phase, in such areas how they will conduct system design, incorporate reliability and maintainability considerations, LCC considerations, support and maintenance concepts, etc., and including how these considerations will be translated into their Validation Phase approach.

5. Contractors will not be evaluated on their Concept Development Phase proposed cost, since they will have been advised in the RFP that the Government has predetermined the anticipated price of the Concept Development Phase contract which will be of the Firm Fixed Price type.

B. Evaluation and Award Criteria

The criteria for evaluation shall consist of three major factors: Concept Viability; Concept Development Approach; Capability and Resources. These factors are listed in order of importance, however, failure to qualify to a minimum threshold in any single factor will be considered overriding to relative importance of higher relative importance of the other factors. The three factors are described below.

1. Concept Viability

The concept proposed by the offeror will be evaluated in terms of the degree to which, in the judgement of the

Government, it offers a sound technological and practical method of satisfying the requirements established by the JMRASM JMENS and Technical Parameters. In making such evaluation, the offeror's demonstrated understanding of the total JMRASM requirement and the merit of his technical approach will be of primary importance. Integral to this part of the evaluation will be a judgement concerning the degree of risk inherent in the technology involved in bringing the concept to a fully operational system, as well as an evaluation of system worth in terms of overall system effectiveness compared to projected system cost.

Additionally, the offeror's technical approach will be evaluated in terms of the impact on his concept of the following specific requirements (all of equal importance):

a. Reliability and Maintainability
b. Support and Maintenance
c. Joint Service Application
d. Cost Predictability
e. NATO RSI Potential
f. Program Schedule Achievement

2. Concept Development Approach

The offeror's planned approach for development of his concept under contract during the Concept Development Phase will be evaluated. Of primary importance will be the offeror's demonstrated plan for development of his concept into a system design suitable for validation and development.

Additionally, the offeror's approach to Concept Development as well as his approach to the Validation Phase proposal preparation will be evaluated in terms of his planning and methodology to be used in satisfying the following specific weapon system requirements:

a. Reliability and Maintainability
b. Integrated Logistics Support
c. Joint Service Integration
d. Cost Estimating
e. Life Cycle Cost
f. Test and Evaluation
g. NATO RSI

3. Capability and Resources

The offeror will be evaluated on his demonstrated capability for development and production of the ultimate JMRASM system. This evaluation constraint is mandatory in view of the JMRASM acquisition strategy whereby Validation Phase contractor(s) will be selected from those contractors performing under Concept Development contracts. Therefore, this evaluation factor will consider the offeror's proven technical and management capability applicable to all phases of JMRASM type acquisitions, and the ready availability of testing and production facilities suitable for the prospective JMRASM Program.

V. EVALUATION PROCEDURE AND TECHNIQUES

A. The SSEB will evaluate all proposals on the basis of the above evaluation criteria. Each component group of the SSEB shall be assigned to review and evaluate those portions of the proposals that relate to its particular areas of expertise.

B. Coordination among the various evaluation groups will be maintained in order that a balanced and informed judgement may be made on each proposal in terms of the applicable evaluation criteria (technical, management, current resources and experience, and cost) and their interface with each other.

C. After completion of the evaluation, a narrative evaluation report will be drafted measuring and evaluating each proposal

against the specified RFP criteria. In addition, a summary report will be drafted, setting forth the recommendations of the SSEB as to which proposals are in a qualifying range for purposes of final contract negotiations and award. This summary report shall contain sufficient detailed rationale to support such recommendations and will be submitted to the SSAC. The summary report will specify those parts of the qualifying proposals that are in need of further clarification, amplification, etc.

D. Based on the above report, the SSAC, in coordination with the SSEB, will determine which proposals qualify for contract award. A summary report of this determination will be prepared by the SSAC.

E. The Contracting Officer will then conduct negotiations/ discussions with those in the qualifying range concerning proposal revisions, drawing on technical assistance of SSEB members, DCAS, DCAA and such others as he deems necessary.

F. On the basis of best and final offers, the SSEB will issue an updated report measuring and evaluating each revised proposal against the specified RFP evaluation criteria. The report will contain sufficient detail to give the SSAC and the SSA a meaningful analysis of each proposal's merit in terms of the evaluation criter-criteria. Each proposal will be rated in the concept viability, concept development approach, and capability and resources areas as to its standing among other proposals in those areas, with discussion of how great the degree of difference is considered to be between the proposals in each of the respective areas. The SSEB updated report will be forwarded to the SSAC under cover of a Summary Source Selection Evaluation Report.

G. The SSAC, upon receipt of the SSEB report and any presentations needed from the SSEB, will refer the SSEB report to the SSA, together with its own proposal analysis report. The SSAC proposal analysis report shall reflect the application of such criteria weights as it has established for the applicable evaluation factors.

H. The SSA, after review of the SSEB report and the SSAC proposal analysis report, and after consideration of any presentations that he may require and review of such proposals as he may deem necessary, will make his decision as to the awardees by employing the evaluation criteria in the manner described herein.

VI. EVALUATION SCHEDULE

After issuance of the RFP, the activities and associated timeframes for evaluation and award are as follows (start days indicated):

SSA Appointed	-30
RFP Issued	0
Receive Proposals	+30
Commence Evaluation	+31
Completion of Evaluation and Determination of Qualifying Range	+45
Negotiations	+52
Final Evaluation by SSEB	+54
Pre-Source Selection Clearnace	+55
SSEB Report to SSAC	+56
SSAC Report	+58
SSA Selection of Awardees	+59
Sign Contracts	+60

VII. EVALUATION CRITERIA FOR VALIDATION PHASE

The criteria for evaluation shall consist of (in decreasing order of importance) a Technical Factor, a Management Factor and a Cost Factor. These Categories are more fully described below.

A. Technical Factor

The concepts and approaches proposed by the contractor, including the proposed JMRASM viewed as a whole, and the implementation thereof as detailed in the proposal, will be evaluated in terms of the degree to which, in the judgement of the Government, they offer a sound technological, practical, and cost-effective method of achieving the goals set forth in the Joint Services Operational Requirements (JSOR) document and meeting the other requirements set forth in the Concept Development contract. The following elements, all of equal importance, will be partially considered:

1. The soundness and acceptability of the performance predictions for the proposed system; the degree to which those predictions demonstrate attainment of the goals set forth in the JSOR; and the degree to which the predicted performance is effective in the operational environment.

2. The estimate of the life cycle cost; the soundness, credibility, and completeness of the offeror's identification of the critical factors of that cost; and the soundness, credibility, and completeness of his life cycle cost estimate.

3. The soundness and acceptability of the contractor's treatment of the technical considerations requirement.

4. The soundness and acceptability of the contractor's proposed support and maintenance program.

5. The soundness and acceptability of the contractor's assessment of risk, his risk minimization proposal, his proposed high risk alternatives, and his proposed test and demonstration

strategy.

B. Management Factor

The contractor's management structure and staff will be evaluated in terms of his capability to successfully manage and accomplish the Validation Phase effort and the degree to which individual events are identified and scheduled to accomplish the total effort. In this regard, the degree to which company resources can be devoted to the fulfillment of the contract requirement (in relation particularly to present and anticipated workload), the degree to which the contractor has identified and provided for potential problem areas, including cost, and the contractor's experience in weapons system concept design, validation, engineering development, and production will be considered.

C. Cost Factor

Offeror's proposal will be evaluated in terms of the estimated cost to the Government of performing the Validation Phase contract including the validity and realism of that cost estimate.

APPENDIX H

MODEL

JMRASM

PROCUREMENT PLAN

1. A Description of the Program/Project, Item or System

This procurement plan addresses the planning for acquisition of a joint U.S. Navy and Air Force weapon system currently identified as the Medium-Range Air-to-Surface Missile System for joint service use (JMRASM).

The objective of JMRASM program development is a common weapon to fill the needs of both services. The system will be designed to ensure launch platform survivability against assessed threat capabilities in planned mission scenarios, as well as ensure missile penetration and survivability against anticipated defenses. Service-unique constraints may dictate a degree of modularity, such constraints arise from considerations of the operating environment and the primary target spectrum for each service.

The planned system will utilize a highly capable missile for high-threat/high-value targets for both tactical air and naval warfare mission areas. It will be designed to interface with several primary launch aircraft, such as the Navy F/A-18 and the Air Force F-16, and several secondary aircraft, such as the Navy S-3A and the Air Force F-15.

The JMRASM is a highly visible program and meets the criteria of a major weapon system program and will be managed in general with the approvals, documentation procedures and requirements attendant thereto. Implications of this categorization on program plans and schedules are discussed in subsequent paragraphs.

2. Program/Project Funding (R&D and Production) Including a Summary of Monies in the FYDP Budget Submissions

Funding requirements for JMRASM at this stage of development have been estimated based on a notional systems concept. These estimates will be refined and improved as industry submits their concepts and related cost estimates.

Funds to date have been expended primarily on technology programs supporting JMRASM developments. It is planned to continue these technology efforts until the critical experiments associated with technology have been completed. Currently, this is expected to be in FY81 or later. Initial expenditure of funds for the JMRASM as a unique program commenced in FY79 under program element 63369N. Concept development is planned in FY80 during which award of multiple contracts in the aggregate value of $1 to $1.5 million is planned.

The JMRASM program will consider NATO Rationalization, Standardization and Interoperability (RSI) requirements and, while not yet quantified, the potential for Foreign Military Sales (FMS) exists.

A summary of the FYDP is as follows:

Navy Funds

FY	Prior	79	80	81	82	83	84	Total
RDT&E								
WPN								
APN								
						Total Navy Funds		

Air Force Funds

RDT&E								
Procurement								
						Total Air Force Funds		
						Total Program Funds		

3. Delivery Requirements, Both R&D and Production Contracts

The JMRASM program under a normal major weapon system development schedule would result in initial production capability in the FY86 time frame. However, in consonance with the projected increased threat, with its attendant requirement for greater operation capabilities, and preliminary congressional indication of a desired 31 December 1984 interim capability for the system, a more condensed development schedule is planned. Even so, competition will be stressed in JMRASM acquisition strategy through validation, dependent, of course, on adequate funding. This planning is further amplified in paragraph 5 below. FMS requirements are not firm and have not impacted schedule plans or delivery.

The technology program initiated several years ago to develop technology for an advanced tactical stand-off missile is being continued as a separate effort in support of the JMRASM program. The primary focus of the technology work is to derive data from free-flight testing of subsystem (i.e., warheads, guidance components, etc.) with recoverable supersonic test vehicles. These data (technology base) resulting from the test and evaluations of the subsystems will be a vital adjunct to the JMRASM system development effort and, as such, will be made available to the JMRASM development contractors as appropriate. It is planned that the procurement of the supersonic test vehicle and subsystem test components will be funded and managed by the JMRASM program office, and subject to separate Procurement Plan activity.

4. Applicability of a Decision Coordinating Paper (DCP) or Program Memorandum, Defense System Acquisition Review Council (DSARC) or Internal Reviews

The JMRASM program meets the criteria of a major weapon system program and will be managed in general with the approvals, documentation procedures, and requirements attendant thereto. All necessary executive documentation (including a DCP) for a program decision will be available for a program review directed by USDR&E in early 1980.

As discussed in paragraphs 5 and 17 below, a Joint Mission Element Need Statement (JMENS) has been drafted and is being reviewed. Formal program go-ahead in the January-February 1980 time frame is anticipated. More detailed milestones will be established at that time in consonance with OSD program approval and specific guidance.

5. Background and Procurement History (A Brief, Factual Summary)

The basic concept of the medium-range air-to-surface missile has existed in Navy advance planning for many years. Navy action on this concept was formalized in 1967 with the decision to initiate a funded technology program to produce a system technology prototype of an advanced tactical standoff missile. Parallel development of propulsion, guidance and other subsystem technologies conducted by the Air Force, industry and other countries have also contributed to the current technology base on which JMRASM concepts can be formulated and system designs developed.

Formalization of JMRASM as a major weapons system procurement has gained impetus in recent months. Several events contributing to this increased emphasis are:

a. Based on an earlier draft Joint-Specific Operational Requirement (JSOR), a draft Joint Mission Element Need Statement (JMENS) was generated for review in December 1978.

b. The Undersecretary of Defense for Research and Engineering (USDR&E) signed a memorandum on 20 April 1979 requesting that a study be initiated to examine the needs, operational requirements, development alternatives, cost and effectiveness of adding a medium-range air-to-surface missile to aircraft weapon suites for joint Navy/Air Force strike missions.

c. In June 1979 OPNAV briefed the Navy/Air Force Joint Requirements and Development Committee (JRDC) on the progress of the JMRASM operational/technical study. A JMRASM Steering Group was subsequently established by the JRDC to determine JMRASM system requirements and produce an updated JMENS.

d. During the FY80 budget hearings in Congress, the House Armed Services Committee gave indication of congressional interest in this program by increasing the Navy FY80 budget request to over $30 million and stipulated that the program must have an initial production capability by 31 December 1984.

e. The Navy has been designated as the Executive Service for the JMRASM program. In recognition thereof, Naval Air Systems Command has established a program office for MRASM advanced development, in anticipation of the JMENS approval and formalization of JMRASM as a major weapon system program. The Naval Weapons Center (NWC) at China Lake is the primary laboratory for technical assessment support to NAVAIR.

f. A briefing will be made to USDR&E by the JMRASM Steering Group in the January-February 1980 time frame. The outcome of this briefing is expected to result in approval to proceed with concept development and validation phases.

In view of the pending approval of JMRASM as a major weapon system acquisition, procurement for this program appears to be certain. The degree of acceleration in the acquisition process to meet a 1986 or earlier data for an initial production capability is not yet defined, but procurement must be initiated now for the early phases, independent of the ultimate overall program acquisition schedule.

6. Discussion of Program/Project Risk Including Technical, Cost and Schedule Risk

Structuring the JMRASM acquisition schedule around the accelerated December 1984 initial production capability date injects a higher degree of risk in the ability to estimate and control program costs and achieve required technical progress on schedule.

However, several actions have been taken which are designed to reduce the degree of risk inherent in the accelerated schedule. The technology development effort will be continued at an accelerated level of effort to yield valuable subsystem technology well into the concept development phase. Results from the technology development effort will be made available to industry competitors on a continuing basis. Additionally, significant industry research and conceptualization to meet the JMRASM requirements has already been accomplished. To use this industry effort to reduce risk, it is planned to involve industry in a competitive manner. Toward that end, an announcement was made in the 16 July 1979 Commerce Business Daily (CBD) requesting that companies interested in JMRASM's concept formulation and development should attend an industry briefing on 2 August 1979. The briefing was held as scheduled and outlined to industry the Navy and Air Force's plans to use their help in meeting its JMRASM requirements. Thus far, 20 companies have indicated an interest in competing for a part in the JMRASM program.

To further capitalize on the current technology base resident with industry, an RFQ(I) is being prepared for issuance

on approximately 28 September 1979. This RFQ(I) will solicit industry sources to submit their preliminary concepts based on a draft of the JMENS. Although response to the RFQ(I) is voluntary, in order to ensure that they are "up to speed", it is anticipated that industry sources with a viable competitive technology base and development/production capability applicable to the JMRASM program will want to respond. The preliminary concepts provided in response to the RFQ(I) will be assessed and used as inputs for the early 1980 briefing to OSD.

Industry will be fully informed of the JMRASM program planning and results from the parallel technology development effort. They will also have the opportunity to quantify their preliminary concepts in response to the RFQ(I). To capitalize on this situation, issuance of an RFP on or about 1 December 1979 is planned. This RFP will request proposals from industry for the funded concept development phase. A rapid response to the RFP will be requested and is deemed feasible in light of the anticipated activity by potential industry sources associated with the RFQ(I) response. With RFP responses in hand prior to the early 1980 OSD briefing, the JMRASM program will be able to present a realistic assessment of alternative concepts and industry capability to OSD, translate OSD approval/direction into prospective contractual requirements and proceed into the concept development phase without further delay, thus preserving the accelerated schedule progress.

Technical risk associated with subsystem technology is assessed to be as follows:

a. Guidance technologies are available that range from low to high in terms of technical risk. Some of the more attractive technologies such as multi-mode guidance with built-in logic features are high risk while more conventional single or dual mode guidance are low-to-moderate risk. The major thrust of the on-going JMRASM technology efforts (discussed in paragraph 3) is aimed at exploring the various guidance technologies. The effort includes examination of a range of guidance technologies from other programs such as MICRAD, SAR (Synthetic Aperture Radar) and ARMY/NAVY SAM (Surface-to-Air). Because of the many guidance options avaialble, risk in this area is considered low-to-moderate.

b. Propulsion technology has been proven in the on-going technology effort. In addition, other programs have provided advancements in solid propulsion, small expendable turbine propulsion and ramjets. The risk in this area is estimated to be low.

c. Warhead and fusing technology efforts are also being funded under other technology and advanced development programs. A low risk is assigned to these elements.

d. A low-to-moderate risk is assumable for the targeting of JMRASM. Although the definition of a stand-off medium range has not yet been resolved, initial judgment derived from threat documents indicates a range probably greater than 80 nautical miles but well under 300 nautical miles.

e. Risk in the area of integration is considered to be low-to-moderate. The integration of missile components into a complete missile is well understood and much

industrial and government experience exists in this area. Missile integration is considered low. Aircraft integration (integration of missile to aircraft) is also well understood and a wide base of experience exists in this area, both in industry and government. The many different types of user aircraft, however, complicates the aircraft integration problem, resulting in an assessed low-to-moderate risk assignment.

7. Integrated Logistics Support Planning Concept

Since this procurement plan has been prepared prior to the conceptual phase, definitive ILS plans and schedules are not yet available. However, it is planned that the MRASM be an all-up-round (AUR).

Preliminary guidance for ILS planning will indicate that, since this is a joint Navy/Air Force weapon system, the missile must be capable of maintenance and handling in both the Navy and Air Force environments.

During sustained offensive or defensive tactical flight operations, rapid turn around/reload of aircraft will be required. Weapon preload checks and loading times will be commensurate with launch platforms' turn-around times.

The maintenance concept for the MRASM will be aligned to correspond to the stated reliability of the missile and the AUR concept.

8. Application of Design to Cost (DTC)

DTC goals and thresholds are being developed as part of the JMRASM program planning and are planned for initial quantification prior to initiation of validation. DTC considerations have been omitted in the RFQ(I) formulation in order to allow wide latitude for industry conceptualization to satisfy the JMRASM JMENS. However, general DTC parameters are planned for inclusion in the RFP requirements.

9. Application of Life-Cycle Cost (LCC)

It is intended to make life-cycle cost (LCC) a major consideration in the JMRASM program. Initial inputs will be requested in the RFQ(I) and, by the time the concept development contracts are awarded, more specific guidance will be available. Current planning is that LCC will be a primary consideration in the selection of validation phase contractors.

10. Reliability, Maintainability, Quality Assurance and Standardization

To improve effectiveness in an increasingly sophisticated and high mach (speed) environment, high reliability must be emphasized in the following areas:

- Reliable avionics and missile/aircraft interface
- High-quality production engineering (producability)
- High-quality control standards during production
- Rugged construction
- High MTBF in storage and captive carry

The importance of R,M&A will be stressed in the RFQ(I) and reiterated and amplified in the RFP requirements. Recognizing that plans in this area have not yet been definitized, it is intended to evolve the generalized guidance indicated above into specific R,M&A requirements prior to Milestone II. This approach will thus permit appropriate tradeoff analysis during the validation phase.

11. System Safety Program Plan

This plan will be developed as the program matures, moving to finalization as the program approaches the validation phase.

12. Test and Evaluation Approach

The JMRASM overall acquisition plan, as reflected in the JMENS, provides for adequate testing and evaluation despite the planned accelerated schedule. It should be recognized that, in meeting the accelerated schedule, some concurrency will be necessary. The amount of concurrency, however, will be dependent on the degree of schedule acceleration. Competitive validation of concepts is planned prior to engineering development. A draft of the Test and Evaluation Master Plan (TEMP) exists and will be further developed/updated as the program matures.

13. Management Information/Program Control Requirements

The program office is aware of the critical importance of a viable and adequate management information system, and will ensure that appropriate management systems are implemented and requirements imposed on contractors as the contractual phases of the program develop. The requirements of NAVAIR Instruction 5200.26A will be met regarding the use of the NAVAIR-developed PROMPT Management System.

14. Approval for Service Use

The JMRASM system will adhere to the policy of adequate testing, proven operational capability, and a determination to be logistically supportable prior to request for approval for commitment to major production. No deviation from this policy is anticipated.

It is intended to involve OPTEVFOR throughout the development effort which is currently planned to start next February (1980).

15. Government-Furnished Material/Facilities/Component Breakout

No government-furnished material or facilities are contemplated for use by contractors in the early phases of the JMRASM program, except that data and test results from the parallel technology development program will be made available to contractors upon request. Some component and subsystem testing will be conducted at government test facilities in keeping with the normal procedures for missile programs. Definition and scheduling of testing using government facilities will be resolved and publicized well in advance of each contractual phase.

No component breakout is anticipated in this missile system acquisition.

16. Application of Should Cost

Application of should cost methodology to the JMRASM system acquisition will be formalized prior to concept validation phase commencement.

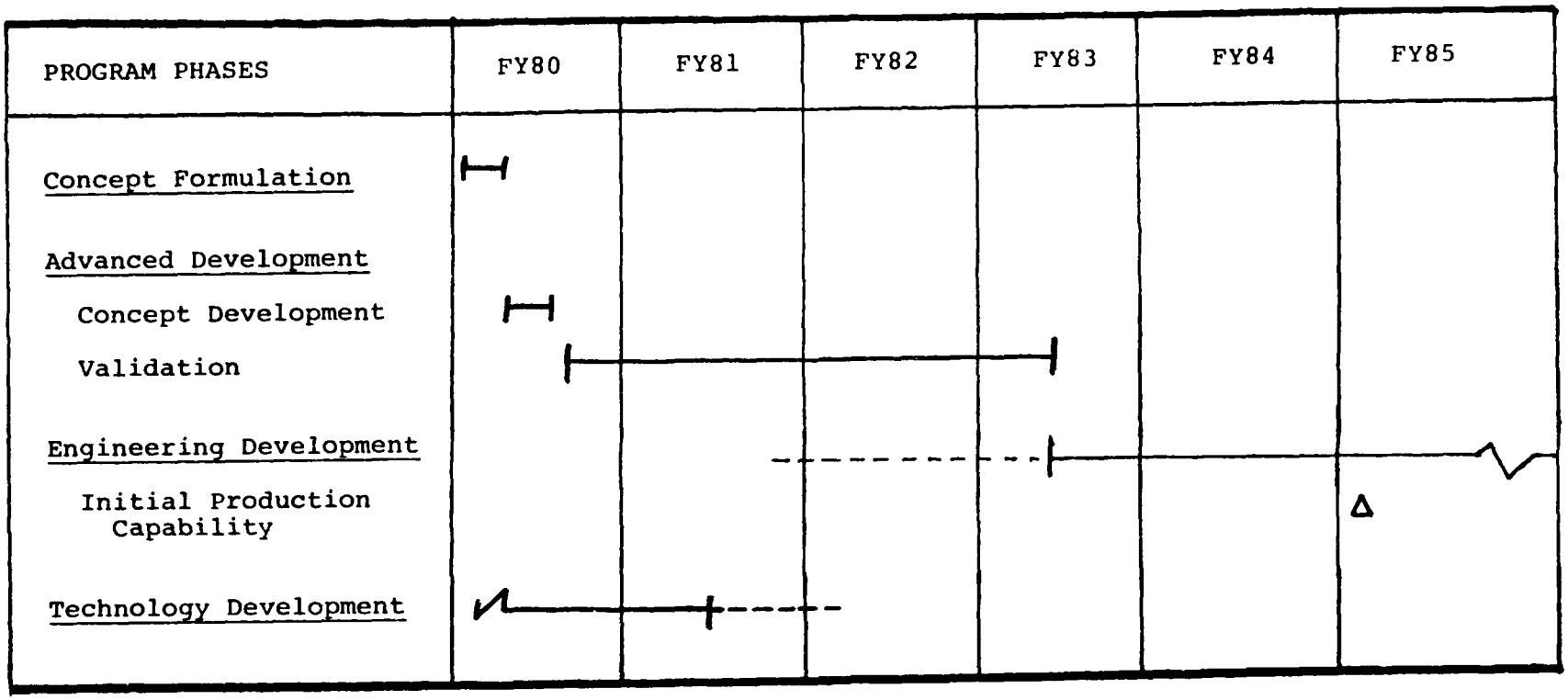
17. Milestone Chart Attachment Depicting the Objective of the Acquisition

The JMRASM Program Plan is presented in Chart 17A.

Subordinate schedules and milestones to support each procurement in the overall acquisition strategy are presented in Charts 20A, 20B and 20C.

CHART 17A

JMRASM PROGRAM PLAN



18. Milestones for Updating the Procurement Plan

This procurement plan will be revised and updated prior to commencement of each contractual phase and/or each major system acquisition milestone.

19. Identification of Participants in the Procurement Plan Preparation

The following personnel have participated in the procurement plan preparation.

20. Procurement Approach to Each Proposed Contract

As depicted in Chart 20A, there will be two contractual phases to the JMRASM program prior to commencement of engineering development. Competition will be emphasized during both of these early contract phases. Under the accelerated schedule approach, engineering development and subsequent phases will be under a single contractor selected from the Validation Phase contractors.

The detailed procurement approach to the first two contractual phases is as follows:

Concept Development

a. Item Description. This phase involves the refinement of industry's JMRASM system concept(s) by interested competitors and quantification of their proposed approach to validating such concept(s) in the next phase.

b. Estimated Cost. It is planned to award multiple contracts to qualifying competitors at the estimated price of $200,000 to $300,000 per individual contract and an aggregate amount of $1 to $1.5 million.

c. Proposed Sources and Basis for Selection. The RFP soliciting industry proposals for the concept development phase will not restrict potential bidders. However, the RFP will clearly state that selection criteria will be heavily biased toward industrial concerns: 1) displaying a viable approach to conceptualization of their proposed system for meeting the JMENS requirements; as well as 2) an established engineering, testing and production capability for a JMRASM-type weapon system.

d. Source Selection Procedures. Formal source selection procedures will be employed in this procurement. Charts 20A and 20B depict milestones applicable to these source selection procedures. The RFP will state the selection criteria upon which concept development and validation phase proposals will be evaluated.

e. Contract Type. Use of the firm fixed price (FFP) type contract is anticipated for this phase. The primary contractual requirement will be the development of their preliminary concept by each selected contractor. Therefore, an FFP contract is deemed appropriate for each contractor in this phase.

f. Negotiation Authority Recommended. The negotiation exception recommended is for research and development.

g. Reprocurement Data. N/A.

h. Other Considerations. Utilization of small business firms, labor surplus area businesses and minority business firms will be encouraged through appropriate prime contract provisions. No special contractual clauses or deviations are anticipated to be required in this procurement.

i. Alternative Procurement Approaches Considered. Restricting competition in this phase to only those contractors who responded to the RFQ(I) was initially considered in view of the national importance of the JMRASM program and the attendant accelerated

acquisition schedule. However, further analysis led to the conclusion that such restriction was not warranted since any contractor who possessed a technology base which would allow a viable proposal to be submitted in response to the RFP would also undoubtedly respond in advance to the RFQ(I).

Utilization of the sole-source approach from the beginning of the program was considered in view of the accelerated program schedule. However, it was concluded that competitive procurement was appropriate for early program phases and is in the overall best interest of the government.

j. Milestones for the Procurement Cycle. Charts 20A and 20B depict milestones applicable to this procurement.

Validation Phase

a. Item Description. This phase involves the validation of concepts by as many as two contractors who successfully complete the concept development phase.

b. Estimated Cost. This phase is planned for the award of two contracts, each in an estimated value of $_____.

c. Proposed Sources and Basis for Selection. The one or two contractors for this validation phase will be selected from the contractors performing the concept development phase. Bases for selection will be the evaluation of proposed concepts to satisfy JMENS requirements and the proposed approach to validating the concepts.

d. Source Selection Procedures. Formal source selection procedures will be employed in this procurement. Charts 20A and 20C depict milestones applicable to these source selection

procedures. The original Source-Selection Authority (SSA), appointed for selection of concept development sources, will also have authority for this source selection. The contract for the concept development phase will contain final criteria to be used in selecting contractors for the validation phase.

e. Contract Type. Use of a cost reimbursement-type contract, possibly with a cost incentive provision (CPIF) is anticipated for this phase. A cost reimbursement-type contract is considered appropriate since effort necessary in concept validation will be peculiar to the specific contractor involved and the achievement of sound technical validation is considered paramount to ultimate cost objectives.

f. Negotiation Authority Recommended. The negotiation exception recommended is for research and development.

g. Reprocurement Data. N/A (Determination of any requirements for delivery of a complete reprocurement data package by the full-scale development contractor will be determined during the Validation Phase).

h. Other Considerations. (Same as for the concept development contract)

i. Alternative Procurement Approaches. (Previously addressed)

j. Milestones for the Procurement Cycle. Charts 20A and 20C depict milestones applicable to this procurement.

ACQUISITION PRELIMINARY PLANNING CHART

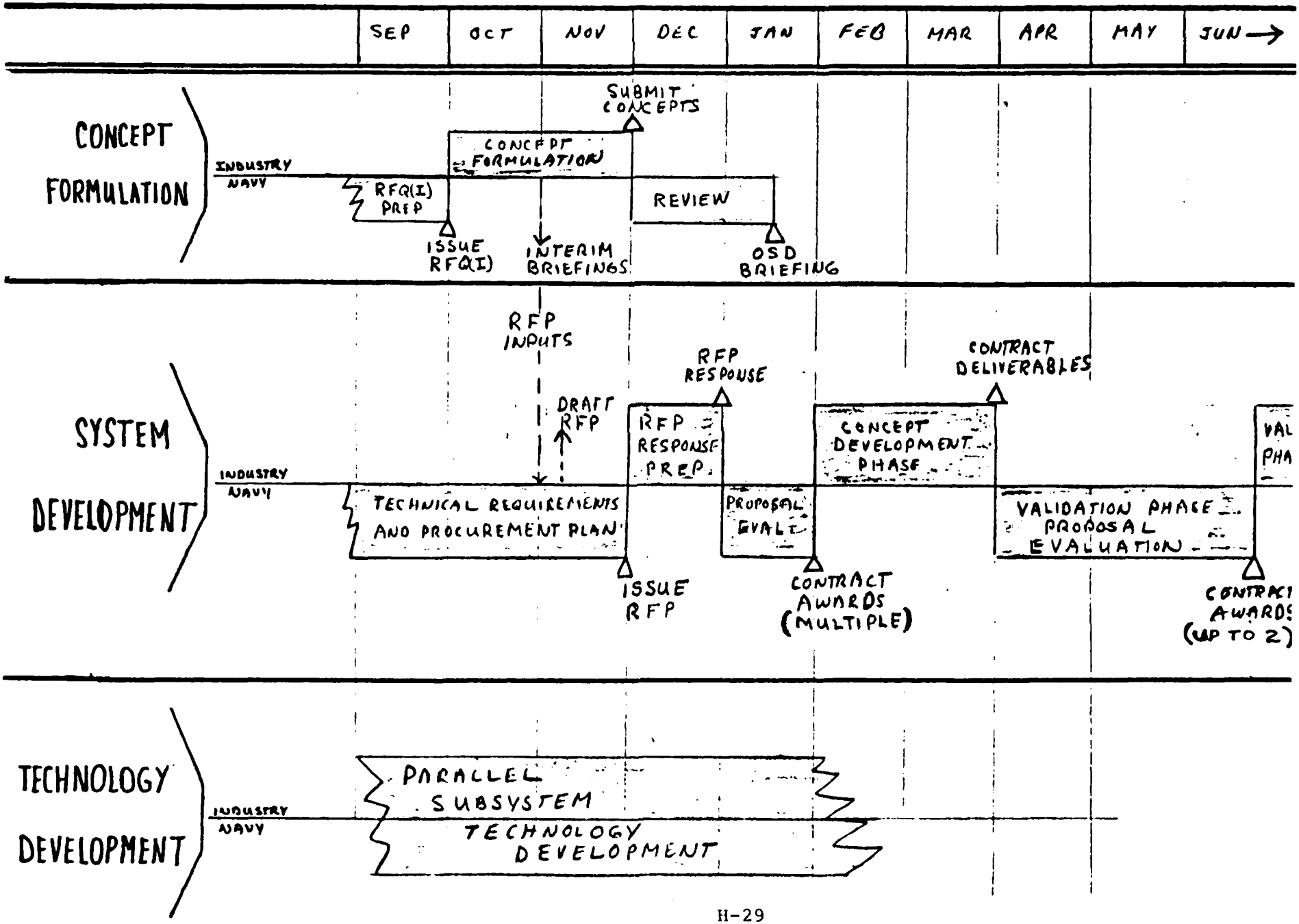


CHART 20B

CONCEPT DEVELOPMENT PHASE PROCUREMENT MILESTONES

VALIDATION PHASE PROCUREMENT MILESTONES

APPENDIX I

TECHNICAL DEFINITION AND ALTERNATIVE ASSESSMENT

Technical Definition and Alternative Assessment

A. Item Description. This element of the JMRASM Weapon System procurement involves the award of several contracts at various stages of the program for research, technical definition, trade-off investigation, and alternative assessment of JMRASM requirements. These procurements are necessary to ensure that program definition and progress are optimized and primary program acquisition contract requirements, schedules, and performance standards are tailored to satisfy program objectives.

B. Estimated Cost. It is estimated that the several contracts ultimately awarded will approximate $3-4 million in the aggregate.

C. Proposed Sources and Basis for Selection. The majority of these contracts will be on a sole source basis to contractors and/or not-for-profit organizations possessing the technical expertise commensurate with the specific JMRASM status necessitating award of contract. Contractors who have been involved in the early stages of the advanced technology development and formulation of JMRASM as a major weapon system acquisition possess a unique background and understanding of the program. It is anticipated that such contractors will continue to be an integral source of these type procurements, especially such firms as Veda, Flight Systems, Inc., Maxfield Associates, and Applied Physics Laboratories.

D. Source Selection Procedures. No formal source selection procedures are anticipated for these contracts.

E. Contract Type. Usually, the cost reimbursement type contract will be utilized for these specialized contracts where technical performance overshadows cost considerations or price. In those cases, where the requirements for a particular contract can be made definitive and discrete, a fixed price type contract will be employed.

F. Negotiation Authority Recommended. The negotiation exception recommended is for research and development.

G. Reprocurement Data. N/A

H. Other Considerations. None

I. Alternative Procurement Approaches Considered. No other procurement approach is deemed feasible.

J. Milestones for the Procurement Cycle. Milestones for each individual contract will be derived commensurate with program needs and the normal procurement approval/accomplishment cycle.

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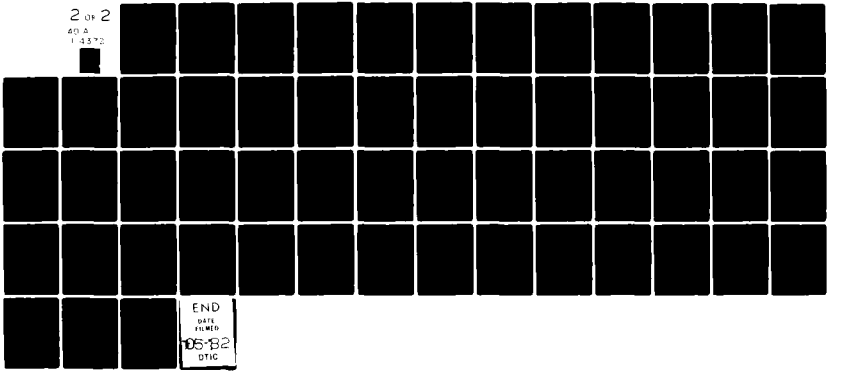

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APPENDIX J

MODEL

PROCUREMENT PLAN

for

CRITICAL TECHNOLOGY DEVELOPMENT

in support of

THE JMRASM PROGRAM

INTRODUCTION

The Technology Development Program described in this Procurement Plan is a continuation of the general effort initiated by the Navy several years ago to develop subsystem technology for an advanced stand-off type missile. In consonance with the anticipated formalization of an advanced missile syster as a major weapon system acquistion, the supporting technology base program is now being focused on critical experiments for subsystem technology specifically required to serve as a base for the missile's concept development and validation. Therefore, this Procurement Plan encompasses those future critical technology development procurement actions planned in support of, and to be managed by, the JMRASM Program.

Format and content of this plan is in general accordance with NAVAIR Instruction 4200.22D. However, since all procurements covered by this plan are for development of technology as opposed to a major system type procurement, sections applicable to system/ hardware/end item type procurements (such as Design to Cost, Life Cycle Cost, ILS, etc.) are not incorporated in this plan.

1. ITEM DESCRIPTION

Research and development will be conducted to explore technologies related to the following major JMRASM type missile subsystems:

Propulsion/airframe

Guidance

Warhead & Fuze

Targeting

Procurement will also involve subsystem integration feasibility, test beds for flight test of experimental packages, and the associated test and evaluation effort. In some cases, the prospective procurements covered by this plan will be a continuation or modification of existing technology development efforts previously initiated under the Navy's general technology program for a stand-off type missile.

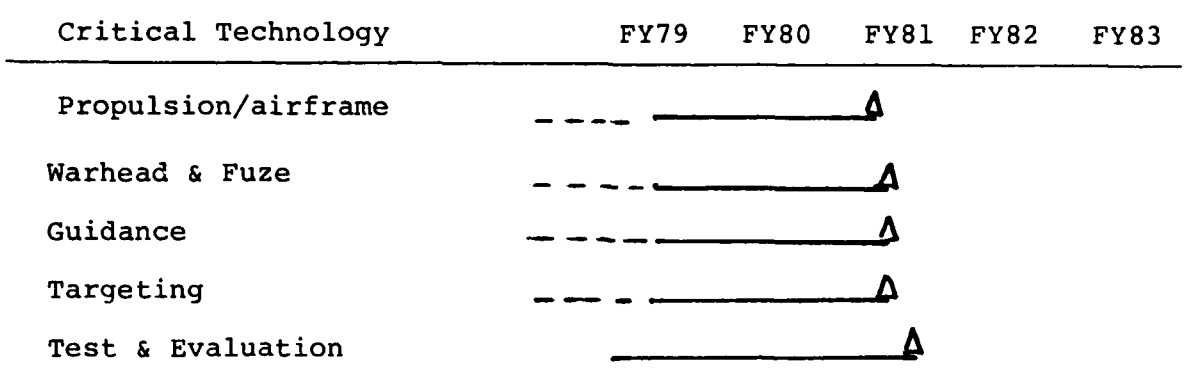
2. FUNDING

Expenditure of funds is planned as follows:

	FY79	FY80	TOTAL
N	$		$ 30M

3. DELIVERY REQUIREMENTS

The schedule for procurement of critical technolocy and delivery of research documentation resulting therefrom, is as follows:



The above schedule, even though independent of the JMRASM acquisition, has been designed to support the missile's Program Plan. This plan is shown in Figure 1.

4. BACKGROUND AND PROCUREMENT HISTORY

The basic concept of a stand-off missile of the medium range air to surface type has existed in Navy advance planning for many years. Navy action on this concept was formalized in 1967 with the decision to initiate a funded technology program to produce a system technology prototype of an advanced tactical standoff missile. Parallel development of propulsion, guidance, and other subsystem technologies conducted by the Air Force, industry, and other countries have also contributed to the current technology base.

JMRASM PROGRAM PLAN

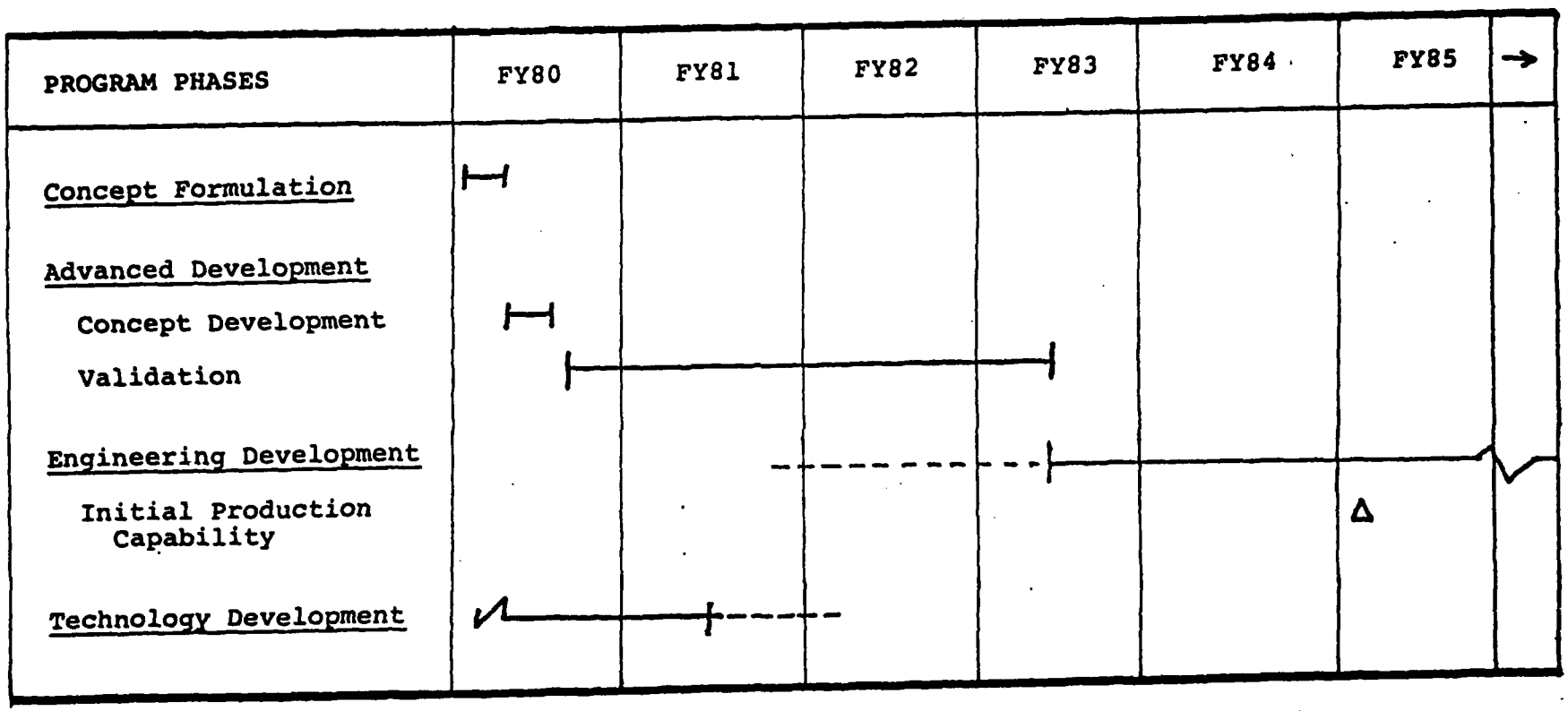


Figure-1

Part of those Navy technology programs initiated several years ago to develop technology for an advanced tactical stand-off type missile are to be continued as a separate effort in support of the JMRASM Program and are the objective of this Procurement Plan. The primary focus of the technology work is to derive data from free-flight testing of subsystems (i.e., warheads, guidance components, etc.) with recoverable supersonic test vehicles. These data (technology base) resulting from the test and evaluations of the subsystems will be a vital adjunct to the JMRASM system development effort and, as such, will be made available to the JMRASM development contactors as appropriate.

5. GOVERNMENT FURNISHED MATERIAL AND FACILITIES

No Government Furnished Material will be supplied to Contractors under procurements covered by this plan. In the testing and evaluation of subsystem experiments, flight test vehicles secured as part of this technology program will be utilized as test beds. Flight testing anticipated under this plan will be conducted at the Naval Weapons Center, China Lake, under Government operational control with contractor support of their specific technology experiments.

6. PROCUREMENT MILESTONE CHARTS

Specific milestones related to the various subsystem procurements are depicted in Figure 2. Flight test and evaluation effort will be included as part of the basic contracts for subsystem technology development.

7. UPDATING OF THE PROCUREMENT PLAN

Since all procurements anticipated by this plan are one-of-a-kind, one time procurememts, no updating of this Procurement Plan is envisioned.

8. PARTICIPANTS IN THIS PROCUREMENT PLAN PREPARATION

The following personnel participated in preparation of this Procurement Plan:

Capt. Gerald Dougherty	JMRASM Program Manager (NAVAIR APC10)
Mr. Edward Gravelin	JMRASM Program Office (" ")
Mr. Joseph Sousa	Contracting Officer (NAVAIR 214)
Mr. P. Palmore	NWC Technology Project Mgr. (NWC 3915)
Mr. R. Francis	NWC ATIGS Project Engineer (NWC 31)
Mr. J. Seibold	NWC MICRAD Project Engineer (NWC 35)

PROCUREMENT MILESTONE CHART

	PROPULSION/ AIRFRAME	WARHEAD & FUZE	GUIDANCE	TARGETING	TEST VEHICLES
Procurement Plan Approval					
Purchase Request (PR) Submittal					
RAN Approval					
Issuance of RFP					
Submission of Proposals					
Proposal Evaluation Complete					
Negotiations Commence					
Negotiations Complete					
Contract Clearance					
Contract Award					

Figure 2

Procurement actions for the several subsystems involved in critical technology development will be handled in a uniform manner. Therefore, the approach described in the following paragraphs will apply to procurement actions for the several subsystems, with exceptions noted where appropriate.

a. Item Description

Technology development will be conducted for the following subsystems: Propulsion/airframe; warhead & fuze; guidance; and targeting. Additionally, procurement of test vehicles for flight test of subsystem experiments is included in this plan.

b. Estimated Cost

Estimates of total contract values for the various subsystems and flight test vehicles are as follows:

Propulsion/Airframe	$
Warhead & Fuze	$
Guidance	$
Targeting	$
Flight Test Vehicles	$

c. Proposed Sources and Basis For Selection

A survey of industry will be made to identify those companies that have a recognized advance technology capability in the subsystems under consideration and the ability to develop and test within the accelerated schedule requirements necessary to meet the JMRASM Validation Phase effort (Figure 1). Proposals will be requested from those companies identified and individual contracts awarded for specific subsystem technology development.

Additional flight test vehicles will be obtained from the current contractor (LTV) by modification of the existing contract. Part of the guidance sybsystem technology development will be done by Honeywell and Motorola via modification of their current technology development contracts.

Selection of contractors for technology development on specific subsystems will be under sole source conditions, with multiple contracts contemplated for some subsystems. This sole source condition is justified due to the following conditions prevailing for this procurement:

(1) There are very few contractors known to have advanced technology capability compatible with the JMRASM missile requirements. The problem anticipated is that of locating and generating interest in a sufficient number of contractors with the required capability and willingness to respond under accelerated conditions necessary to ensure success of this technology development program.

(2) Many aspects of the advanced technology involve highly classified and state-of-the-art data critical to national defense. The Government will be sharing classified data with the various contractors in order to optimize this further technology development effort, and must ensure proper safeguarding of such data which precludes widespread dissemination in a solicitation process.

(3) In the case of the flight test vehicles, the existing contractor (LTV) who has provided prior test vehicles,is the only contractor capable of producing such vehicles at this time and must be used in the procurement of additional vehicles. This will involve modification of the existing LTV technology contract.

(4) There is little likelihood that a participant in the technology effort will gain competitive advantage in the JMRASM major weapon system acquisition. All offerors in the competitive JMRASM missile procurement will have access to all technology development data.

d. Source Selection Procedures

Since sole source procedures will be involved in these procurements, no formal selection procedures will apply.

e. Contract Type

Cost reimbursement type contracts are contemplated for all procurements involved in this technology development program. The objective of each contract will be to produce and test appropriate technology within the constraints of schedule and funding.

f. Negotiation Authority Recommended

Negotiation authority should be based on a combination of exceptions involving "Experimental, Developmental, or Research Work" and "Classified Purchases".

g. Reprocurement Data

No reprocurement data packages are appropriate since only technology development is involved in these procurements.

h. Other Considerations

The research and critical schedule aspects of these technology development procurements preclude the application of requirements derived from general national programs, such as small business, labor surplus areas, energy conservation measures, etc.

i. Alternative Procurement Approaches Considered

No alternative procurement approaches are deemed feasible for the requirements of this special and critical procurement situation.

j. Milestones For the Procurement Cycle

Detailed milestones in the procurement cycle for the several subsystems are shown in Figure 2.

APPENDIX K

MODEL PROCUREMENT

REQUEST

PROCUREMENT REQUEST (PR) (PAGE 1)
NAVAIR FORM 4235/4 (REV. 4-78) *See NAVAIRINST 4200.13B*

1. Use typewriter for all pages.
2. Use "Remarks" blocks or continuation sheets if more space is required

1 CONTRACT NO	CONTRACTOR NAME AND ADDRESS	2 PR NO	REV NO
N00019		N00019	
		DATE	

LIES, SERVICES, MODIFICATION OR OTHER ACTION *(Brief summary or refer to an attachment)*

Research, technical assessment, and design analysis to develop a concept which meets the JMRASM (Joint Service Medium Range Air to Surface Missile) requirements (see Section F of the Schedule).

4 AUTHORITY FOR PR *(Program Directive or Other Document and Date)*	5 PROCUREMENT PLAN NO AND DATE
	JMRASM Proc. Plan dtd

6 (see Attachment 10) PLANNED PROCUREMENT MILESTONES

a CONTRACT AWARD/ EXECUTION DATE	b INITIAL DELIVERY/ PERFORMANCE	c COMPLETION DATE	d DELIVERY OR COMPLETION DATES ARE	e MAXIMUM SLIPPAGE ALLOWANCE
4 MOS. AFTER RECEIPT OF PR IN CONTRACTS GROUP	0 MOS. AFTER CONTRACT AWARD/EXECUTION DATE	2 MOS. AFTER CONTRACT AWARD/EXECUTION DATE	☐ DESIRED *(Complete "c")* ☒ REQUIRED *(Complete "f")*	0 MONTHS

7 SOURCE OF REQUIREMENT *(Attach supporting documentation or refer to applicable document)*

JMRASM Procurement Plan (Number , dated)

7 FINANCIAL INFORMATION

FUNDS REQUIRED	AMOUNT	NAVMAT FORM 7300/6 ATTACHED
☒ YES ☐ NO	$1,200,000 (See Remarks on page 2)	☒ YES ☐ NO

8 SECURITY REQUIREMENTS

a WILL CONTRACTOR REQUIRE ACCESS TO CLASSIFIED INFORMATION	b IF PR IS FOR MODIFICATION OF EXISTING CONTRACT, CHECK ONE	c HIGHEST LEVEL OF INFO TO WHICH CONTRACTOR NEEDS ACCESS
☒ YES *(Draft DD Form 254 attached. Complete "e" and "f")*	☐ CHANGE IN SECURITY ASPECTS OF CONTRACT IS *NECESSARY (Attach new Draft DD Form 254 and complete "e" and "f")*	TO PERFORM WORK REQUIRED BY THE CONTRACT
☐ NO PROCUREMENT DOES NOT INVOLVE SECURITY AND NO CONTRACTUAL PAPERS WILL BE CLASSIFIED	☐ SECURITY ASPECTS OF MODIFICATION DO NOT ALTER SECURITY REQUIREMENTS OF CONTRACT	☐ TOP SECRET ☒ SECRET ☐ CONFIDENTIAL

d THE SECURITY ASPECTS OF THIS PR AND ATTACHED SCHEDULE ARE APPROVED

SIGNATURE *(Inspector General and Security Div. Official)* DATE

TO RECEIVE SOLICITATION DOCUMENT OR TO PREPARE AND SUBMIT RESPONSE THERETO

☐ TOP SECRET ☒ SECRET ☐ CONFIDENTIAL

RECOMMENDED SOURCE(S)

a NAME(S) AND ADDRESS(ES)	LAST CONTRACT NUMBER(S)
All attendees at the JMRASM Industry Briefing held on 2 August 1979 (listed in Attachment 1)	

h ARE ALL KNOWN SMALL BUSINESS FIRMS RECOMMENDED IN 9a

☐ YES ☐ NO *(Explain)* N/A (CBD invitation to Industry Briefing was open to any and all qualified firms)

c IS THIS PROCUREMENT SUSCEPTIBLE TO SMALL BUSINESS SET ASIDE *(ASPR 1-706.5 and 1-706.6)*

☐ YES *(Complete "d")* ☒ NO

d ☐ TOTAL ☐ PARTIAL

10 CERTIFICATION. I certify that the facts and representations under my cognizance in this Procurement Request and its supporting papers are accurate to the best of my knowledge and belief.

SIGNATURE AND TYPED NAME OF ORIGINATOR *(Include Code, Room No. and Telephone No.)*	DATE	SIGNATURE AND TYPED NAME OF PERSON COGNIZANT OF DESIGN *(If other than originator) (Include Code, Room No. and Telephone No.)*	DATE

11. APPROVALS

SIGNATURE AND TYPED NAME OF COGNIZANT DIVISION DIRECTOR	DATE	SIGNATURE AND TYPED NAME OF COGNIZANT PROJECT/ACQUISITION MANAGER *(Include Code, Room No. and Telephone No.)*	DATE

PREVIOUS ISSUES OF THIS FORM ARE OBSOLETE

PROCUREMENT REQUEST (PR) (PAGE 2)
NAVAIR FORM 4235/4 (REV. 4-78)

12a WILL THE GOVT FURNISH MATERIAL	b IS THIS PROCUREMENT FOR A NAVY STOCK ITEM	c WILL NAVY OWNED MATERIAL BE FURNISHED FOR INCORPORATION INTO THE STOCK ITEM
☐ YES (List attached) ☒ NO	☐ YES ☒ NO	☐ YES (NAVAIR Form 4341/11 Attached) ☒ NO

ADDITIONAL FACILITIES BE NEEDED TO PERFORM THIS CONTRACT

☐ ES (Explain) ☒ NO ☐ UNKNOWN

14a IS GOVERNMENT PRODUCTION AND RESEARCH PROPERTY TO BE USED IN PERFORMANCE OF THE CONTRACT	b CONTRACT NO(S)	c CONTRACTOR	d DOLLAR VALUES
	GOVERNMENT FACILITIES		
	GOVERNMENT SPECIAL TEST EQUIPMENT		
☐ YES (Complete "b", "c", and "d") ☒ NO	GOVERNMENT SPECIAL TOOLING		

15 PRIORITY RATING CERT FOR NATL DEFENSE UNDER DMS REG 1	16 DOD MASTER URGENCY LIST DESIGNATOR NO
Not yet assigned	Not yet assigned

17a WILL MODEL BE USED FOR SOLICITATION	b LOCATION FOR DISPLAY OF MODEL
☐ YES (Complete "b") ☒ NO	

18 WILL MODEL BE FURNISHED AS GFP	19 ARE ANY V/8R/4E/BE COG ITEMS INCLUDED
☐ YES ☒ NO	☐ YES (Complete Block 20) ☒ NO

20 REVIEWED BY SUPPLY POLICY AND MANAGEMENT DIVISION (Enter Name, Title, and Code)	DATE
N/A	

21 PRODUCTION STAGE (Check one)

a ☐ LTD. PROD. (Complete 22a, 23, 24) N/A
c ☐ SECOND UNLTD. PROD. (Complete 22a, 23, 26, 27a, 29)
e ☐ QPL ITEM (Complete 22a, 28, 29)
b ☐ INITIAL UNLTD. PROD. (Complete 22a, 23, 25, 26, 29)
d ☐ OTHER (3RD, 4TH, ETC.) PROD. RUN _____ (Complete 22a, 23, 26, 27a, 29)

22a ARE THERE EST FUTURE REQUIREMENTS	b EST. DATE AND QUANTITY NEXT PROCUREMENT
☐ YES (Complete "b") ☐ NO	

23 EQUIPMENT DESIGNED AND DEVELOPED BY	CONTRACT NO(S) AND DATE(S)

24 HAS PROVISIONAL APPROVAL FOR SERVICE USE BEEN GRANTED	25. HAS THE EQUIPMENT BEEN FULLY APPROVED FOR SERVICE USE
☐ YES (Copy approved NAVMAT Form 4000/1A Attached) ☐ NO (Copy SECNAV/SECDEF Waiver Attached)	☐ YES (Copy approved NAVMAT Form 4000/1A Attached) ☐ NO (Explain)

26. WILL FIRST ARTICLE APPROVAL BE REQUIRED (ASPR Section I, Part 19)

☐ YES (Indicate whether ☐ CONTRACTOR TESTING ☐ GOVERNMENT TESTING) ☐ NO (Explain)

27a. WAS FIRST ARTICLE REQUIRED UNDER PREVIOUS CONTRACT	b. WAS FIRST ARTICLE APPROVED UNDER PREVIOUS CONTRACT
☐ YES (List Contract No., Contractor, and Complete "b") ☐ NO	☐ YES ☐ NO (Justification Required by NPD 1 1902(c) Attached)

28. IF QPL ITEM, LIST SPEC NO., TITLE AND DATE	29 SURVEILLANCE CRITICALITY DESIGNATOR
	☐ A ☐ B ☐ C ☐ NONE

30. N/A

LEADTIME AND INVESTMENT
(Complete only if Procurement is to be Negotiated pursuant to ASPR 3-214.)

a PRODUCTION LEADTIME FOR PROPOSED CONTRACTOR (Months after execution of contract)	b PRODUCTION LEADTIME FOR NEW SOURCE (Months After Execution of Contract)				
	DESIGN AND ENGINEERING	MANUFACTURE OF PREPRODUCTION UNIT	TEST AND EVALUATION	ACQUISITION OF MATERIALS*	TOTAL LEADTIME (Mos.)

c. COSTS OF NATURE DESCRIBED IN ASPR 3-214.2(i), (ii) AND (iii)	d. EST. COSTS WHICH WOULD BE DUPLICATED IF PROCUREMENT WERE FORMALLY ADVERTISED	e EST. ADDITIONAL COSTS WHICH GOV'T WOULD LIKELY INCUR BY DUPLICATION
$	$	$

REMARKS

Block 7: Acquisition Strategy, as reflected in the JMRASM Procurement Plan, provides for competitive procurement of contractors to perform Concept Development of their proposed JMRASM concept. Provision has been made to award up to six Concept Development contracts to qualified tractors, with individual contracts to be of the Firm Fixed Price (FFP) e. The Government estimates a price of $200,000 for the required contract scope of individual contracts.

* Include Special Test Equipment, Special Tooling, and Manufacture of First Production Equipment.

PROCUREMENT REQUEST (PR) (PAGE 3)
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31 N/A

INDUSTRIAL MOBILIZATION
(Complete only if procurement is to be negotiated pursuant to ASPR 3.216.)

a. IS MORE THAN ONE SOURCE NECESSARY FOR INDUSTRIAL READINESS
☐ YES *(Complete "b" and "c")* ☐ NO

b. NUMBER OF SOURCES REQUIRED

R OF SOURCES TO BE SOLICITED *(Explain if only One Source is to be Solicited)*

J IS THIS PROCUREMENT FOR ESTABLISHMENT OF ADDITIONAL SOURCE(S)
☐ YES *(List Sources in Block 9aj (Give Reason for Soliciting Only Those Sources)*
☐ NO *(Indicate Steps Taken to Establish Additional Sources and Results of Such Steps)*

e MOBILIZATION REQUIREMENTS ARE
☐ ATTACHED ☐ INCLUDED IN PROCUREMENT PLAN NO. ☐ AVAILABLE FROM INDUSTRIAL PLANNING DIVISION

f. NAVY MOBILIZATION MASTER URGENCY LIST (NMMUL) NO

32. TECHNICAL DATA
(See ASPR Section IX, Parts 2 and 5)

a. ARE TECHNICAL DATA TO BE PROCURED
☐ YES *(Complete "b")* ☒ NO

b. LIST ATTACHED
☐ DD FORM 1423 ☐ LIST OF ADDRESSEES FOR DD FORM 1423 ☐ NAVAIR FORM 4200/25 OR 4200/30

ARE SPECS AND DRAWINGS ADEQUATE FOR COMPETITIVE PROCUREMENT
☐ YES ☐ NO *(Complete "d" and "e")*

d. STEPS TAKEN TO MAKE SPECS AND DRAWINGS ADEQUATE

e. DATE SPECS AND DRAWINGS WILL BE MADE AVAILABLE

f. ARE SPECS. AND DRAWINGS REQUIRED BY PROSPECTIVE BIDDERS/OFFERORS?
☐ YES *(Attach Specs. and Drawings or Complete "g")* ☒ NO *(Explain)*

g. SPECS. AND DRAWINGS
☐ MAY BE EXAMINED AT ☐ ARE AVAILABLE FROM ☐ WILL BE MAILED TO BIDDERS/OFFERORS UNDER SEPARATE COVER

h. DOES GOV'T HAVE UNLIMITED RIGHTS TO TECHNICAL DATA
☒ YES ☐ NO *(Complete "i")*

i. IS SPECIFIC REQUISITION OF UNLIMITED RIGHTS PLANNED
☐ YES *(Show as Line Item in Section B of Schedule)* ☐ NO *(Explain)*

33. ARE MANAGEMENT SYSTEMS REQUIRED
☐ YES *(DD Form 1660 Attached)* ☒ NO

34. IS A PROJECT SUMMARY WORK BREAKDOWN STRUCTURE APPLICABLE
☐ YES ☒ NO

35. DO COST/SCHEDULE CONTROL SYSTEMS CRITERIA (C/SCSC) APPLY
☐ YES ☒ NO

36. ARE PRODUCTION PROGRESS REPORTS (DD FORM 375) REQUIRED
☐ YES ☒ NO

37. ARE MATERIAL INSPECTION AND RECEIVING REPORTS (DD FORM 250) REQUIRED
☐ YES ☒ NO

38. ARE NATIONAL STOCK NUMBERS REQUIRED
☐ YES ☒ NO

39. ARE PROVISIONED ITEMS OR OTHER CONTINGENCY ITEMS REQUIRED *(Para. 108, Chap. 1, NAVAIRINST 4200.13B)*
☐ YES *(Estab. as Sep., Unfunded, Unpriced Line Items in Sec. E of PR Sched.)* ☒ NO

40. INDICATE WHAT QUALITY ASSURANCE PROVISION APPLIES *(Para. 109, Chap. 1 of NAVAIRINST 4200.13B)*
N/A (no hardware)
☐ MIL-I-45208 ☐ MIL-Q-9858A

41. IS A RELIABILITY AND MAINTAINABILITY (R&M) PROGRAM REQUIRED *(Para. 110, Chap. 1 of NAVAIRINST 4200.13B)*
☐ YES ☒ NO *(Explain)* (Concept Development will consider system R&M)

42. RESEARCH AND DEVELOPMENT (R&D) CATEGORY *(Check One)* *(Complete this Block and Applicable Blocks 43 through 48 Only if Proposed Procurement is for R&D Effort)*
☒ RESEARCH ☐ EXPLORATORY DEVELOPMENT ☐ ADVANCED DEVELOPMENT ☐ ENGINEERING DEVELOPMENT ☐ OPERATIONAL SYSTEMS DEVELOPMENT

43. IS A DD FORM 1498 (RESEARCH AND TECHNOLOGY WORK UNIT SUMMARY) REQUIRED
☐ YES *(Attach Copy)* ☒ NO *(State Reason)*

44. DOES THE ESTIMATED VALUE OF THIS PROCUREMENT EXCEED $100,000?
☒ YES *(Attach RDT&E Brief)* ☐ NO

REMARKS

PROCUREMENT REQUEST (PR) (PAGE 4)
NAVAIR FORM 4235/4 (REV. 4-78)

45a. IS THIS TO BE A COMPETITIVE PROCUREMENT

[X] YES *(Attach Criteria for Eval. of Proposals and Complete "b")* [ ] NO *(Complete Block 46)*

b. WAS THIS PROCUREMENT SYNOPIZED IN ADVANCE

[ ] YES *(Attach Copy of Advance Notice and Complete "c")* NO *(Explain)* (see Remarks)

c. RESPONDERS TO THE ADVANCE NOTICE BEEN DETERMINED QUALIFIED TO BE SOLICITED

[ ] YES *(List in Block 9a)* [ ] NO *(List Firm(s) not Qualified and cite Reason(s))*

46. [ ] PROCUREMENT IS TO BE NON-COMPETITIVE *(Complete Justification Attached)*

47. IS PATENT RIGHTS DOCUMENTATION - PART I COMPLETED AND ATTACHED

[X] YES [ ] NO *(Explain)*

48a. ARE DEVELOPMENT TESTS INVOLVED

[ ] YES *(Complete "b")* [X] NO

b. PURPOSE OF TESTS *(Para. 111, Chapter 1 of NAVAIRINST 4200.13B)*

[ ] TECHEVAL [ ] OPEVAL [ ] COMBINATION TECHEVAL/ OPEVAL [ ] OTHER *(Explain)*

49. ARE SAFETY PROGRAM REQUIREMENTS APPLICABLE *(Para. 112, Chapter 1 of NAVAIR-INST 4200.13B)*

[ ] YES [X] NO

50. IS FREQUENCY ALLOCATION APPROVAL REQUIRED

[ ] YES *(Attach DD 1494 or Cite Document and Date)* [X] NO

51. ARE COMPUTER RESOURCES TO BE PROCURED *(Para. 113, Chap. 1, NAVAIRINST 4200.13B)*

[ ] YES [X] NO

52. ARE DESIGN-TO-COST MEASURES TO BE APPLIED

[ ] YES [X] NO

53. N/A

MISCELLANEOUS PROCUREMENTS

The Proposed Procurement is Exclusively for: *(Check Applicable Space)*

	CONTRACTOR SERVICES *(NAVAIRINST 4350.3B)*		PARTS OR COMPONENTS BEING PROCURED AS REPLACEMENT PARTS *(ASPR 3-210.2 (xv))*
	EXPERT AND CONSULTANT SERVICES *(ASPR 22-200 and Chapter 304 Federal Personnel Manual)*		PRODUCT SUPPORT PROGRAM *(NAVAIRINST 5200.33)*
	A STUDY OR SURVEY OTHER THAN RDT&E *(ASPR 3-210.2 (viii))*		BASIC ORDERING AGREEMENT (BOA) *(ASPR 3-410.2 and NPD 3-410.2)*
	MAINTENANCE, REPAIRS, ALTERATIONS THE EXACT NATURE OF WHICH OR AMOUNT OF WORK TO BE DONE IS UNKNOWN *(ASPR 3-210.2 (ix))*		

54. ADDITIONAL DISTRIBUTION OF CONTRACT/CONTRACT MODIFICATION

NUMBER OF COPIES	NAME/CODE	ADDRESS

55. CHECK LIST OF SPECIAL CLAUSES

	CLAUSE TITLE	BLOCK NO.	ASPR OR NAVAIR CLAUSE
	FIRST ARTICLE APPROVAL -CONTRACTOR TESTING *(ASPR 1-1903)*	26	ASPR 7-104.55(a)
	FIRST ARTICLE APPROVAL -GOVT TESTING *(ASPR 1-1903)*	26	ASPR 7-104.55(b)
	MANAGEMENT SYSTEMS REQUIREMENTS *(ASPR 1-331(e))*	33	ASPR 7-104.50
	COST/SCHEDULE CONTROL SYSTEMS *(ASPR 1-331(b) and NAVAIRINST 7000.5A)*	35	ASPR 7-104.87 and 7-2003.43
	PRODUCTION PROGRESS REPORT - DD FORM 375 *(ASPR 25-202)*	36	ASPR 7-104.51 and NAVAIR
	MATERIAL INSPECTION AND RECEIVING REPORT - DD FORM 250 *(ASPR Appendix I)*	37	ASPR 7-104.62 and NAVAIR
	NATIONAL STOCK NUMBERS *(NAVAIRINST 4410.1B)*	38	NAVAIR
	QUALITY PROGRAM - (MIL Q 9858A) *(ASPR 14-304 and NAVAIRINST 5400.23B)*	40	ASPR 7-104.28
	INSPECTION SYSTEM (FIXED PRICE - MIL-I-45208) *(ASPR 14-303)*	40	ASPR 7-103.5(a) and 7-104.33
	INSPECTION OF SUPPLIES AND CORRECTION OF DEFECTS (Cost Reimbursement Supply - MIL-I-45208) *(ASPR 14-303)*	40	ASPR 7-203.5(a) and (b)
	SAFETY PRECAUTIONS FOR AMMUNITION AND EXPLOSIVES *(ASPR 1-323)*	49	ASPR 7-104.79
	ACCIDENT REPORTING AND INVESTIGATION INVOLVING AIRCRAFT, ETC.	49	ASPR 7-104.81
	FREQUENCY AUTHORIZATION	50	ASPR 7-104.61
	VALUE ENGINEERING INCENTIVE *(ASPR 1-1702.1 and 1-1707 and Para. 114, Chapter 1, NAVAIRINST 4200.13B)*	NA	
	VALUE ENGINEERING PROGRAM *(ASPR 1-1702.3 and Para. 114, Chapter 1, NAVAIRINST 4200.13B)*	NA	
	OPTION PROVISIONS *(Para. 115, Chapter 1, NAVAIRINST 4200.13B) (Furnish justification)*	NA	

REMARKS

Block 45b: The RFQ(I) issued 1 Oct 79 (and sent to all attendees at the earlier JMRASM Industry Briefing) announced that an RFP would be forthcoming. A draft of the RFP resulting from this PR will also be sent to the briefing attendees, prior to release of the formal RFP. Attendance at the JMRASM Industry Briefing was solicited by an announcement in the CBD.

Block 45c: Descrimination of bidders by qualification has not yet been attempted.

56. CHECKLIST OF ATTACHMENTS

	NO	ITEM	BLOCK NO.
X		SCHEDULE INSERT *(Check Applicable Insert(s))* [X] E [X] F [ ] G [X] H [X] I [ ] J	3
X		DOCUMENTATION TO SUPPORT REQUIRED DELIVERY DATE (Attachment 10)	6f
X		FINANCIAL DATA ADDENDUM SHEET *(NAVMAT Form 7300/6)* (Attachment 11)	7
X		CONTRACT SECURITY CLASSIFICATION SPECIFICATION *(DD Form 254) (Draft)* (Attachment 4)	8a /8b
	X	LIST OF GOVERNMENT FURNISHED MATERIAL	12a.
	X	GOVERNMENT FURNISHED MATERIAL (GFM) USED IN PROCUREMENT FOR STORES-52000 SERIES OF FUNCTIONAL ACCOUNTS *(NAVAIR Form 4341/11)*	12c.
	X	APPROVAL FOR SERVICE USE ACTION SHEET *(NAVMAT Form 4000/1A) (For Provisional ASU)* – APPROVED	24
	X	SECNAV/SECDEV WAIVER TO PROCURE IN ADVANCE OF FULL ASU	24
	X	APPROVAL FOR SERVICE USE ACTION SHEET *(NAVMAT Form 4000/1A) (For Full ASU)* – APPROVED	25
	X	JUSTIFICATION REQUIRED BY NPD 1-1902(c)	27b
	X	MOBILIZATION REQUIREMENTS *(This will classify the PR if attached)*	31e
		CONTRACT DATA REQUIREMENTS LIST *(DD Form 1423)* EXHIBIT(S) (Exhibits A and B)	32b
	X	LIST OF ADDRESSEES FOR CONTRACT DATA REQUIREMENTS LIST *(DD Form 1423)* EXHIBITS	32b
	X	ENGINEERING DRAWINGS AND ASSOCIATED DATA REQUIREMENTS *(NAVAIR Form 4200/25)*	32b
	X	ENGINEERING DRAWINGS ASSOCIATED LISTS AND RELATED DATA REQUIREMENTS *(NAVAIR Form 4200/30)*	32b
	X	SPECIFICATIONS AND DRAWINGS	32f
	X	MANAGEMENT SYSTEMS SUMMARY LIST *(DD Form 1660)*	33
	X	RESEARCH AND TECHNOLOGY WORK UNIT SUMMARY *(DD Form 1498)*	43
X		RDT&E BRIEF (Attachment 12)	44
X		CRITERIA FOR EVALUATION OF RDT&E PROPOSALS (Attachment 7)	45a
	X	ADVANCE NOTICE FOR RDT&E (COPY)	45b
	X	JUSTIFICATION FOR NONCOMPETITIVE R&D PROCUREMENT	46
X		PATENT RIGHTS DOCUMENTATION–PART I *(For R&D Effort)* (Attachment 5)	47
	X	APPLICATION FOR FREQUENCY ALLOCATION *(DD Form 1494)* – APPROVED	50
		Attachments 1,2,3,6,8 and 9 (see recap)	

SCHEDULE

Section E - Supplies or Services and Prices

Item	Supplies or Services	Unit Price	Total Price
0001	JMRASM Concept Development	$200,000	$200,000
0002	JMRASM Concept Development Report (NSP)	(see Exhibit A)	
0003	JMRASM Validation Phase Proposal (NSP)	(see Exhibit B)	

SCHEDULE

Section F - Description or Specifications

Item 0001. The JMRASM Concept Development required hereunder shall be accomplished in accordance with the following Statement of Work:

STATEMENT OF WORK

The Contractor will perform the design and analyses effort necessary for the development of his concept for the JOINT Medium-Range Air-to-Surface Missile (JMRASM) suitable for validation during the next phase of the JMRASM weapon system program. In development of his concept, the Contractor must meet all requirements of the JMRASM Joint Mission Element Need Statement (JMENS) (Attachment 2 hereto) and the JMRASM Technical Parameters (Attachment 3 hereto).

Item 0002. The JMRASM Concept Development Report will be delivered in accordance with the Contract Data Requirements List (DD Form 1423) (Exhibit A).

Item 0003. The JMRASM Validation Phase Proposal will be delivered in accordance with the Contract Data Requirements List (DD Form 1423) (Exhibit B).

SCHEDULE

Section H - Deliveries or Performance

Item 0001 - The Concept Development effort required under this item shall be performed from the date of this contract and be completed by the end of 2 months thereafter.

Item 0002 - The Concept Development Report shall be delivered as required by the Contract Data Requirements List (Exhibit A).

Item 0003 - The Validation Phase Proposal shall be delivered as required by the Contract Data Requirements List (Exhibit B).

SCHEDULE

Section I - Inspection and Acceptance

Item 0001 - N/A

Items 0002 and 0003 - Inspection and acceptance shall be by Naval Air Systems Command (APC10), Washington, D.C.

ATCH NR 1 TO EXHIBIT A

TO CONTRACT/PR _____

CONTRACT DATA REQUIREMENTS LIST

CATEGORY Technical

SYSTEM/ITEM JMRASM

CONTRACTOR _____

1. SEQUENCE NUMBER	2. TITLE OR DESCRIPTION OF DATA 3. SUBTITLE	6. TECHNICAL OFFICE	10. FREQUENCY	12. DATE OF 1ST SUBMISSION	14. DISTRIBUTION AND ADDRESSEES (Addressee - Regular Copies - Repro Copies)
4. AUTHORITY (Data Item Number)	5. CONTRACT REFERENCE	7. DD250 REQ / 8. APP CODE (A) / 9. INPUT TO IAC (X)	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBM/EVENT ID	15. TOTAL
1.	2. 3.	6.	10.	12.	14.
4.	5.	7. / 8. / 9.	11.	13.	
16. REMARKS					
1. A001	2. 3. Concept Development Report	6. APC10	10. One time	12. 31MAR80	14. 50 - NAVAIR
4.	5.	7. No / 8. / 9.	11.	13.	
16. REMARKS					
1.	2. 3.	6.	10.	12.	14.
4.	5.	7. / 8. / 9.	11.	13.	
16. REMARKS					
1.	2. 3.	6.	10.	12.	14.
4.	5.	7. / 8. / 9.	11.	13.	
16. REMARKS					

PREPARED BY	DATE	APPROVED BY	DATE

DD FORM 1 JAN 79 1423 S/N 0102-LF-014-2300

REPLACES EDITION OF 1 JUN 68, WHICH IS USABLE.

PAGE ___ OF ___ PAGES

ATCN NR 1 TO EXHIBIT B

TO CONTRACT/PR _____

CONTRACT DATA REQUIREMENTS LIST

CATEGORY Technical

SYSTEM ITEM JMRASM

CONTRACTOR _____

1. SEQUENCE NUMBER	2. TITLE OR DESCRIPTION OF DATA 3. SUBTITLE	6. TECHNICAL OFFICE	10. FREQUENCY	12. DATE OF 1ST SUBMISSION	14. DISTRIBUTION AND ADDRESSEES (Addressee – Regular Copies Repro Copies)
4. AUTHORITY (Data Item Number)	5. CONTRACT REFERENCE	7. DD250 REQ / 8. APP CODE (A) / 9. INPUT TO IAC (X)	11. AS OF DATE	13. DATE OF SUBSEQUENT SUBM EVENT ID	
16. REMARKS					15. TOTAL
B001	Validation Phase Proposal	APC10	One time	31MAR80	100 - NAVAIR
		NO			
					15. TOTAL
					15. TOTAL
					15. TOTAL

PREPARED BY	DATE	APPROVED BY	DATE

DD FORM 1 JAN 75 1423 S/N 0102-LF-014-2300

REPLACES EDITION OF 1 JUN 69, WHICH IS USABLE

PAGE ____ OF ____ PAGES

Recap of PR Attachments

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1 - JMRASM Industry Briefing Attendees

2 - JMRASM JMENS

3 - JMRASM Technical Parameters

4 - Contract Security Classification Specification (DD Form 254)

5 - Patent Rights Documentation - Part I

6 - Format, Organization, and Content of Concept Development Proposal

7 - Criteria For Evaluation of Concept Development Proposals

8 - Format,Organization, and Content of Validation Phase Proposal

9 - Criteria For Evaluation of Validation Phase Proposals

10 - JMRASM Program Schedules

11 - Financial Data Addendum Sheet (NAVMAT Form 7300/6)

12 - Research, Development, Test and Evaluation Brief

ATTACHMENT 6

FORMAT, ORGANIZATION, AND CONTENT OF CONCEPT DEVELOPMENT PROPOSAL

1. Format, Organization and Content of Proposals

   a. Proposals are to be prepared and submitted using standard 8½ x 11 inch paper, with foldouts as required. Typing is to be single spaced, not to exceed fifteen (15) characters/spaces to the linear inch and not exceeding six (6) lines/spaces to the vertical inch. Each section within a volume shall start on a new page. There is not print size limitations applicable to the presentation of cost data.

   b. In presenting material in these proposals, the offeror shall follow the general rule that quality of information is significantly more important than quantity. This rule should guide the offeror in his proposal preparation even though no page count limit is imposed in this solicitation.

   c. The proposal shall be organized into five (5) volumes, with sections, as follows:

Volume	I	Executive Summary
Volume	II	JMRASM Concept
Volume	III	Proposal for Concept Development
Volume	IV	Contractor Capability and Resources
Volume	V	Cost and Pricing Proposal

d. Volume I - Executive Summary

This volume shall provide a concise summary (approximately 10 pages) of the information contained in Volumes II, III, IV, and V.

e. Volume II - JMRASM Concept

This volume shall define and describe the offeror's concept to satisfy the JMRASM JMENS requirements. This volume shall be structured into the following sections:

Section 1 - Understanding of the Government's Requirements

This section shall be used by the offeror to describe his understanding of the Government's needs and requirements as reflected in the JMRASM JMENS and Technical Parameters.

Section 2 - Technical Approach to Satisfy JMRASM Requirements

This section shall be used to describe and document the technical approach of the offeror's concept. The offeror must include rationale as to why his concept provides a sound technological approach to satisfying the JMRASM requirements. Integral to this section will be the offeror's evaluation of the degree of risk inherent in the technology

involved in bringing the concept to a fully operational system.

Section 3 - System Worth

This section shall be used to portray the offeror's evaluation of his proposed concept in terms of its overall worth. This involves evaluation of the estimated overall system effectiveness which will result from development of his proposed concept, equated against projected ultimate system total cost (life-cycle cost).

Section 4 - System Considerations

This section shall describe the offeror's projected consideration and/or impact on the development and validation of his proposed concept for the following areas:

a. Reliability and Maintainability
b. Support and Maintenance
c. Joint Service Application
d. Cost Predictability
e. NATO RSI Potential
f. Program Schedule Achievement

f. Volume III - Concept Development Proposal

This volume shall describe and document the offeror's technical proposal to perform Concept Development of

his concept under contract. This volume shall be structured into the following sections:

Section 1 - Concept Development

This section shall be used to describe the offeror's proposed technical approach for the development of his concept under contract. Of primary importance in this section will be the offeror's documented plan for development of his concept into a system design suitable for validation and development. Integral to this section will be the offeror's planning and methodology to be used in satisfying the following weapon system requirements:

a. Reliability and Maintainability
b. Integrated Logistics Support
c. Joint Service Integration
d. Cost Analysis and Estimating Methodology
e. Life-Cycle Cost
f. Test and Evaluation
g. NATO RSI

Section 2 - Validation Proposal Preparation

The offeror will describe in this section his planned approach to the generation of his definitive proposal for the Validation Phase. This proposal will be a discrete item to be delivered along with the Concept Development Report at the conclusion of the

Concept Development contract. The planned approach for generation of the Validation Phase Cost Proposal must address consideration and methodology to be used in satisfying the same weapon system requirements cited in Section 2 above, as well as the cost analysis and methodology to be used in this proposal preparation. This proposal will be a key factor to be evaluated for selection of Validation Phase contractors.

g. Volume IV - Contractor Capability and Resources

This volume shall be used to describe and document the offeror's capability and resources related to his ability to perform the Concept Development contract as well as his demonstrated capability for development and production of the ultimate JMRASM system. This evaluation constraint is mandatory in view of the JMRASM acquisition strategy whereby Validation Phase contractor(s) will be selected from those contractors performing under Concept Development contracts. Therefore, this volume must describe the offeror's proven technical and management capability applicable to all phases of JMRASM-type acquisitions, and the ready availability of testing and production facilities suitable for the prospective JMRASM Program. This volume will be structured into three (3) sections, titled as follows:

Section 1 - Weapon Systems Experience
Section 2 - Management Capability
Section 3 - Facilities and Other Resources

h. Volume V - Proposed Price

The offeror shall document in this volume the cost and pricing data used in determining his proposed price for performing the Concept Development Phase contract. This volume must include a complete and detailed cost breakdown summarized on DD Form 633.

ATTACHMENT 7

CRITERIA FOR EVALUATION OF CONCEPT DEVELOPMENT PROPOSALS

The criteria for evaluation shall consist of three major factors: Concept Viability; Concept Development Approach; Capability and Resources. These factors are listed in order of importance, However, failure to qualify to a minimum threshold in any single factor will be considered overriding to relative importance of higher relative importance of the other factors. The three factors are described below.

1. Concept Viability

The concept proposed by the offeror will be evaluated in terms of the degree to which, in the judgement of the Government, it offers a sound technological and practical method of satisfying the requirements established by the JMRASM JMENS and Technical Parameters. In making such evaluation, the offeror's demonstrated understanding of the total JMRASM requirement and the merit of his technical approach will be of primary importance. Integral to this part of the evaluation will be a judgement concerning the degree of risk inherent in the technology involved in bringing the concept to a fully operational system, as well as an evaluation of system worth in terms of overall system effectiveness compared to projected system cost.

Additionally, the offeror's technical approach will be evaluated in terms of the impact on his concept of the following specific requirements (all of equal importance):

a. Reliability and Maintainability
b. Support and Maintenance
c. Joint Service Application
d. Cost Predictability
e. NATO RSI Potential
f. Program Schedule Achievement

2. Concept Development Approach

The offeror's planned approach for development of his concept under contract during the Concept Development Phase will be evaluated. Of primary importance will be the offeror's demonstrated plan for development of his concept into a system design suitable for validation and development.

Additionally, the offeror's approach to Concept Development as well as his approach to the Validation Phase proposal preparation will be evaluated in terms of his planning and methodology to be used in satisfying the following specific weapon system requirements:

a. Reliability and Maintainability
b. Integrated Logistics Support
c. Joint Service Integration
d. Cost Estimating
e. Life Cycle Cost
f. Test and Evaluation
g. NATO RSI

3. Capability and Resources

The offeror will be evaluated on his demonstrated capability for development and production of the ultimate JMRASM system. This evaluation constraint is mandatory in view of the JMRASM acquisition strategy whereby Validation Phase contractor(s) will be selected from those contractors performing under Concept Development contracts.

Therefore, this evaluation factor will consider the offeror's proven technical and management capability applicable to all phases of JMRASM type acquisitions, and the ready availability of testing and production facilities suitable for the prospective JMRASM Program.

ATTACHMENT 8

FORMAT, ORGANIZATION, AND CONTENT OF VALIDATION PHASE PROPOSAL

1. Format, Organization and Content of Proposals

a. Proposals are to be prepared and submitted using standard 8½ x 11 inch paper, with foldouts as required. Typing is to be single spaced, not to exceed fifteen (15) characters/spaces to the linear inch and not exceeding six (6) lines/spaces to the vertical inch. Each section within a volume shall start on a new page. There is not print size limitations applicable to the presentation of cost data.

b. In presenting material in these proposals, the offeror shall follow the general rule that quality of information is significantly more important than quantity. This rule should guide the offeror in his proposal preparation even though no page count limit is imposed.

c. The proposal shall be organized into four (4) volumes, identified as follows:

Volume I	Executive Summary
Volume II	Technical
Volume III	Management
Volume IV	Cost

d. The content of each volume shall be as follows:

Volume I - EXECUTIVE SUMMARY

This volume shall provide a concise summary (approximately 10 pages) of the information and data contained in Volumes II,III, and IV.

Volume II - TECHNICAL

This volume shall describe and document the concepts and approaches proposed by the contractor, including the proposed JMRASM viewed as a whole, and implementation thereof. The offeror should fully explain how his approach offers a sound technological, practical, and cost-effective method of achieving the goals set forth in the Joint Specific Operational Requirements (JSOR) document as well as the JMRASM JMENS and Technical Parameters requirements of the Concept Development contract. The following elements, all of equal importance, must be considered in particular:

1. The soundness and acceptability of the performance predictions for the proposed system; the degree to which those predictions demonstrate attainment of the goals cited above; and the degree to which the predicted performance is effective in the operational mode and environment.

2. Estimate of the life-cycle cost, and the critical factors inherent in that cost as well as the basis for the credibility and completeness of the life-cycle cost.

3. The planning and methodology to be used in satisfying the following weapon system requirements:

   a. Reliability and Maintainability
   b. Integrated Logistics Support
   c. Joint Service Integration
   d. Cost Analysis and Estimating Methodology
   e. Life - Cycle Cost
   f. Test and Evaluation
   g. NATO RSI

4. The assessment of risk and the associated risk minimization proposal and alternatives' strategy.

Volume III - MANAGEMENT

This volume must describe the offeror's management structure and staff in terms of his capability to successfully manage and accomplish the Validation Phase effort, as well as portray those individual events identified and scheduled to accomplish the total effort. In this regard, the degree to which company resources can be devoted to the fulfillment of the contract requirement (in relation particularly to present and anticipated workload), the degree to which the contractor has identified and provided for potential problem areas, including cost, and the contractor's experience in weapons system concept design, validation, engineering development, and production must be explained.

Volume IV - COST

This volume shall document and describe the total cost estimated to be required for the accomplishment of the Validation Phase using a cost reimbursement type contract with incentive fee arrangements (CPIF). The offeror must include a complete and detailed cost breakdown to substantiate his proposed cost and summarized on DD Form 633.

ATTACHMENT 9

CRITERIA FOR EVALUATION OF VALIDATION PHASE PROPOSALS

The criteria for evaluation shall consist of (in decreasing order of importance) a Technical Factor, a Management Factor and a Cost Factor. These categories are more fully described below.

A. Technical Factor

The concepts and approaches proposed by the contractor, including the proposed JMRASM viewed as a whole, and the implementation thereof as detailed in the proposal, will be evaluated in terms of the degree to which, in the judgment of the Government, they offer a sound technological, practical, and cost-effective method of achieving the goals set forth in the Joint Specific Operational Requirements (JSOR) document and meeting the other requirements set forth in the Concept Development contract. The following elements, all of equal importance, will be particularly considered:

1. The soundness and acceptability of the performance predictions for the proposed system; the degree to which those predictions demonstrate attainment of the goals set forth in the JSOR; and the degree to which the predicted performance is effective in the operational environment.

2. The estimate of the life-cycle cost; the soundness, credibility, and completeness of the offeror's identification

of the critical factors of that cost; and the soundness, credibility, and completeness of his life-cycle cost estimate.

3. The soundness and acceptability of the contractor's treatment of the technical considerations requirement.

4. The soundness and acceptability of the contractor's proposed support and maintenance program.

5. The soundness and acceptability of the contractor's assessment of risk, his risk minimization proposal, his proposed high-risk alternatives, and his proposed test and demonstration strategy.

B. Management Factor

The contractor's management structure and staff will be evaluated in terms of his capability to successfully manage and accomplish the Validation Phase effort and the degree to which individual events are identified and scheduled to accomplish the total effort. In this regard, the degree to which company resources can be devoted to the fulfillment of the contract requirement (in relation particularly to present and anticipated workload), the degree to which the contractor has identified and provided for potential problem areas, including cost, and the contractor's experience in weapons system concept design, validation, engineering development, and production will be considered.

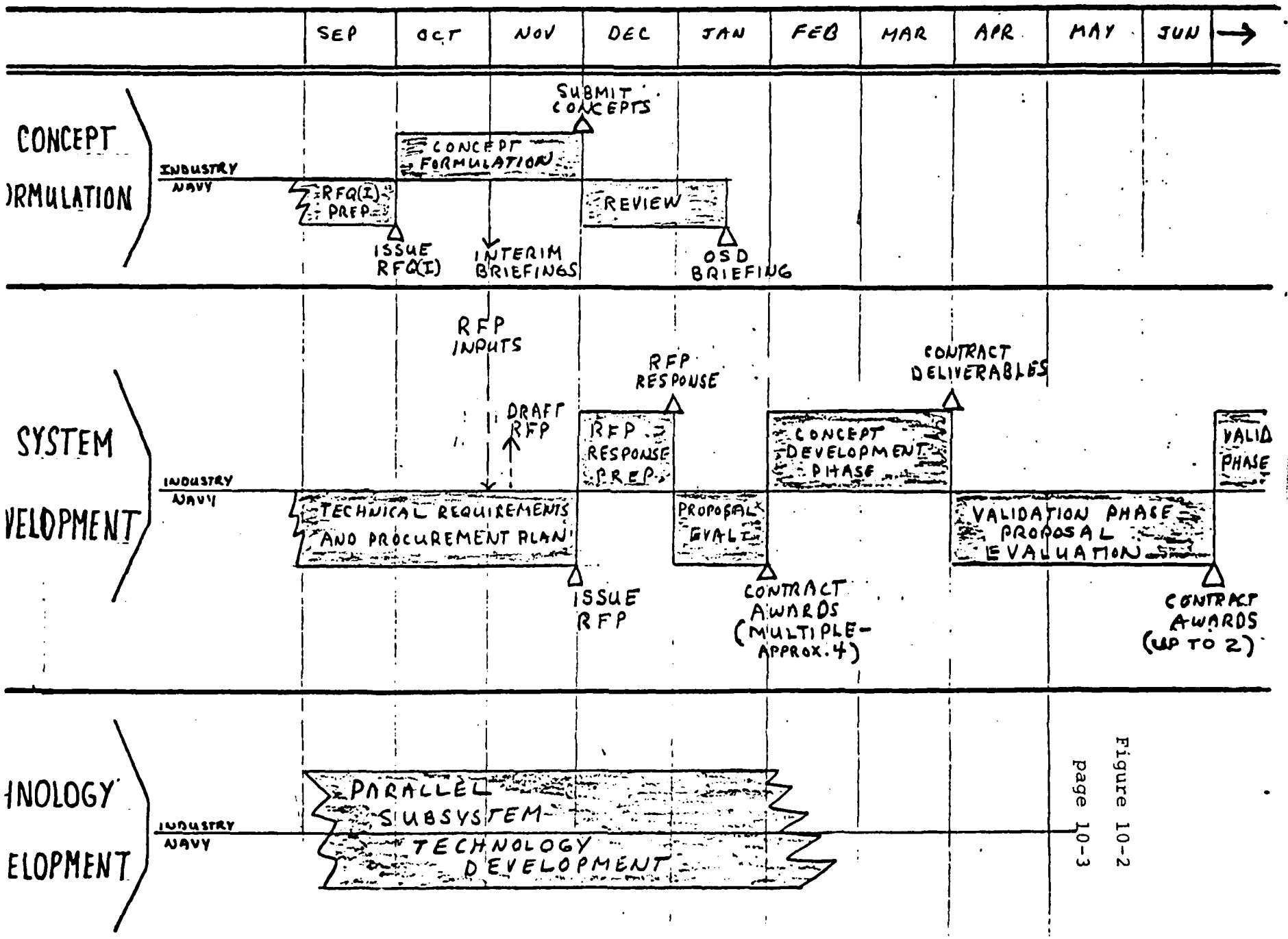
C. Cost Factor

Offeror's proposal will be evaluated in terms of the estimated cost to the Government of performing the Validation Phase contract including the validity and realism of that cost estimate.

ATTACHMENT 10

JMRASM PROGRAM SCHEDULES

The current JMRASM Program overall schedule is depicted in Figure 10-1. Details of acquisition strategy and procurement planning for the Concept Development and Validation Phases are depicted in Figure 10-2.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JAN
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NAVY
SUBMIT CONCEPTS
CONCEPT FORMULATION
RFQ(I) PREP
REVIEW
ISSUE RFQ(I)
INTERIM BRIEFINGS
OSD BRIEFING
RFP INPUTS
RFP RESPONSE
CONTRACT DELIVERABLES
DRAFT RFP
SYSTEM
VELOPMENT
INDUSTRY
NAVY
RFP RESPONSE PREP
CONCEPT DEVELOPMENT PHASE
VALID PHASE
TECHNICAL REQUIREMENTS AND PROCUREMENT PLAN
PROPOSAL EVALU
VALIDATION PHASE PROPOSAL EVALUATION
ISSUE RFP
CONTRACT AWARDS (MULTIPLE-APPROX. 4)
CONTRACT AWARDS (UP TO 2)
INOLOGY
ELOPMENT
INDUSTRY
NAVY
PARALLEL SUBSYSTEM-
TECHNOLOGY DEVELOPMENT

Figure 10-2

JMRASM PROGRAM PLAN

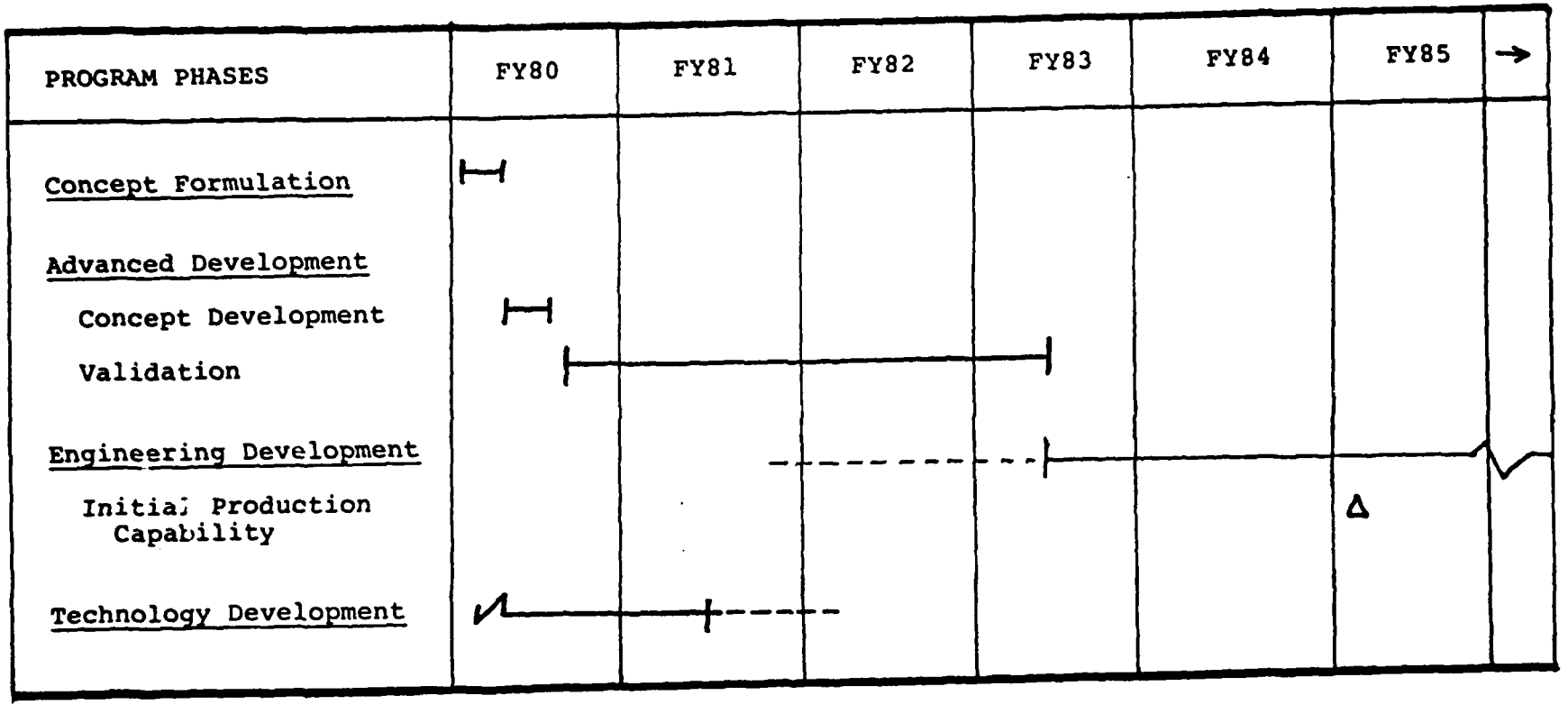


Figure 10-1

MEMORANDUM

Re: Background Information Related to the JMRASM Concept Development PR

In finalization and review of the subject PR, it must be remembered that the JMRASM Acquisition Strategy limits the selection of one or more contractors to do the Validation Phase from those contractors who have been selected and awarded Concept Development Phase contracts. Therefore, Concept Development Phase selection criteria must include consideration for the offeror's capabilility and experience to enable him to perform the entire JMRASM Program, including Full Scale Development and Production.

Additionally, one of the deliverables under the Concept Development contract will be a Validation Phase Proposal. Hence, the RFP resulting from this PR must contain all requirements necessary for the contractor to perform the Concept Development Phase, which thus includes:

a. Validation Phase Proposal format instructions
b. Validation Phase Proposal evaluation criteria

JMRASM PR PENDING ACTION ITEMS

Block 7 - Financial Data Addendum Sheet (NAVMAT Form 7300/6) (Attachment 11 to the PR)

Block 8 - Contract Security Classification Specification (DD Form 254) (Attachment 4 to the PR)

Block 15 - DMS Priorty Rating (Obtain thru ESA - 64)

Block 44 - RDT&E Brief (Per NAVMAT Inst. 3900.3B) (Attachment 12 to the PR)

Block 47 - Patent Rights Documentation - Part I (See NAVAIR Inst. 5870.2B) (Attachment 5 to the PR)

List of JMRASM Industry Briefing Attendees (Attachment 1 to the PR)

Coordination of Reliability, Maintenance, and Quality provisions with AIR-5205

Coordination of Value Engineering requirements as being not applicable to this phase with AIR-52014

APPENDIX L

CURRENT JMRASM STATUS

CURRENT JMRASM STATUS

The current JMRASM program, as indicated previously, has placed greater emphasis on the technology effort than on the system acquisition aspects of the program. This increased tempo in the technology base will continue for the foreseeable future. This is not to say that a JMRASM system acquisition program is being terminated, but rather, current activity in acquisition is being limited to planning.

Before leaving the subject of system acquisition, it should be recalled that Congress appropriated $30 million in FY-80 for the JMRASM program and that the Navy is undecided whether or not there should be an interim program to meet the Congressional required 1984 production date. How much of these funds, if any, will be programmed to JMRASM is uncertain. As of this writing, (January 1980), the controversy relative to a interim JMRASM program is still not resolved. Until it is resolved a skeletal acquisition program structure is being maintained to permit a surge in the program leading to an early deployment of a complete weapon system.

The technology oriented program now being pursued covers four broad areas associated with missile development as follows:

GUIDANCE

PROPULSION

WARHEAD

INTEGRATION

While planning in each of the above areas is not complete sufficient information is available to provide a general description (tasks, assignments and contract statement of work) planned activity and schedule through FY-81. Of course, these schedules are dependent on funding.

The planning activity, as currently identified has been grouped to reflect the major project they support. Because of the anticipated parallel development of the program technology base and major system, the JMRASM effort is funded by both the technology base and JMRASM program elements. The amount and type of funds obligated are shown for each task. The JMRASM development schedule for FY-79 is at Figure 1.

Guidance

The objectives of the guidance and control effort for advanced air-launched stand-off missile systems is to provide technology to assure destruction of a wide variety of hard and/or well defended targets. The integrated guidance system elements will provide for an effective day/night all-weather strike capability. An analysis will be conducted to determine the capability and desirability of using the developed items in all-up weapons for fleet deployment. To this end, the following work has been initiated.

Technology Base (PE 63306N)

GOVERNMENT:

AIRTASK (Naval Air System Command Work Assignment to Government Support Organization)with Naval Weapons Center to develop air-to-surface missile guidance technology. The effort will involve the design, integration test and evaluation of an integrated all-weather guidance system which is matched to the high supersonic speed regime. The system elements of concern are a strapped down mid-course inertial guidance system, a microwave radiometer, and an on-board digital correlator. More specifically,

Work Unit 01 - Conduct advance development of the ATIGS/MICRAD guidance system. Laboratory, captive and free flight test and evaluation are to be performed on a timely basis. ($1,635,000)

Work Unit 02 - Development of ATIGS as a mid-course guidance subsystem. Laboratory, captive and free flight test and evaluation are to be performed on a timely basis. ($184,000)

Work Unit 03 - Advance development, analysis, integration and evaluation of all weather MICRAD mid-course update and accurate terminal guidance seeker for laboratory, captive and free flight testing. ($165,000)

NOTE: A portion of this AIRTASK is being contracted to private industry.

INDUSTRY:

Contract with Honeywell, Inc. to develop a detailed baseline design for an active/passive millimeter wave seeker for application to the Supersonic Tactical Missile High Altitude and Sea Skimmer Missions. (79-PR-RB-001) ($99,500)

Contract with Honeywell, Inc. to establish the MICRAD seeker functional software requirements for captive flight testing of the MICRAD seeker. (79-PR-RB-002) ($55,000)

JMRASM (PE 63369)

GOVERNMENT:

AIRTASK with Naval Weapons Center to conduct an Advanced Development Program in support of the concept definition and validation phases of the Medium Range Air-to-Surface Missile Program. This effort will involve: Threat and requirements analysis; system concept formulation studies; system integration studies; system/subsystem development test and evaluation and support to the MRASM Program Office. (A03P-ADPO-23/008C/9W0650-001)

Work Unit 01 - See Warhead Section

Work Unit 02 - See Supporting Activities

Work Unit 03 - Specifically to conduct Phase II missile guidance development effort as approved by the JMRASM Guidance Working Group. ($1,265,514)

AIRTASK with Naval Weapons Center to conduct an Advanced Development Program in support of the concept definition and validation phases of the Medium Range Air-to-Surface Missile Program. (A03P-ADPO-23/008C/9W0548-001)

Work Unit ol - Provide a Recoverable Test Vehicle (RTV) for flight testing of advanced guidance systems during FY-81 and beyond. Covers the NWC and Vought Corporation activities associated with the immediate reactivation of ATV/RTV design work at Vought. ($1,100,000)

Work Unit 02 - Develop a guidance technology/data base to support the concept formulation and validation phases of the JMRASM program. ($950,000)

INDUSTRY

Contract with Motorola to provide current data on squint mode seeker capabilities as they relate to the JMRASM program. ($200,000)

Propulsion

The objective of the propulsion technology effort is to obtain significant performance advantages through the use of low volume, integral rocket ramjet and other related concepts for long range, tactical standoff missile systems. Before a final missile system configuration can be validated for Engineering Development, it will be necessary to configure Advanced Development Models for test and evaluation. The major efforts in this area are:

Technology Base (PE 63306N)

GOVERNMENT:

AIRTASK with Naval Weapon Center will conduct Advanced Development, provide test and evaluation support and participate in integration and analysis directed toward the development of an advanced Air-Launched Low Volume Ramjet (ALVRJ). NWC is also responsible for the development and fabrication of the solid rocket booster grain and expellable nozzle. (A-03P-03P2/008C/9W0627-001)

Work Unit 01 - NWC will conduct Advanced Development of the ALVRJ, oriented toward an advanced Supersonic Tactical Missile System. FY-79 effort will emphasize continued effort in the test and evaluation of an improved thermal protection system for the ALVRJ combustion chamber to improve its durability and substantially reduce its complexity and cost. ($225,000)

Work Unit 02 - NWC will conduct Advanced Development program effort in the areas of development, management coordination and support for the ALVRFJ/STM. ($1,773,000)

Warhead

The objective of this Lethality Assessment effort is to investigate two variant warheads for JMRASM; UMT variant and internal detonation variant. Specific work in this area includes:

Technology Base (PE 62306N)

GOVERNMENT:

AIRTASK with Naval Weapon Center to investigate the weapon system integration capabilities of the proposed warheads. (A03P-ADPO-23/008C/9W0996) ($738,000)

JMRASM (PE 63369N)

GOVERNMENT:

AIRTASK with Naval Surface Weapons Center to investigate the lethality of the UMT variant. (A-03P-ADPO-23/009C/9W0650-001) ($555,000)

AIRTASK with Naval Weapons Center to investigate the lethality of the internal detonation variant. (W/U. #1, AIRTASK A03P-ADPO-23/008C/9W0650-001) ($445,000)

System Integration Activities

This effort provides technical and analytical support of the overall JMRASM effort. More specifically this includes:

JMRASM (PE 63369N)

GOVERNMENT:

AIRTASK with Naval Weapons Center to conduct a Concept Formulation Study. (W.U. #2 AIRTASK AO3P-ADPO-23/008C/9W0650-001) ($450,000)

Contract with the Chief Naval Operation (OP-05) to assess the emergence of new weapon program alternatives as they relate to the Medium Range Air-to-Surface missile and defense suppression requirements. ($150,000)

INDUSTRY:

Contract with Flight Systems, Inc. to develop a Threat Analysis and Systems Needs for JMRASM. Includes the preparation of draft JMENS documents. Contract being modified to perform a cost trade-off evaluation of the various technical alternatives available. ($200,000)

Contract with VEDA to assess the compatibility of the current on-board radars with the range, maneuverability, and speed requirements of JMRASM. ($100,000)

Contract with Maxfield Associates, Ltd., to conduct an independent analysis of the model structure, process and techniques necessary to identify technical alternatives to

optimize the efficiency of the program. Contract being modified to develop recommended criteria to measure program execution for use in the program master plan or other technical development plans. ($50,000 FY-79) - ($50,000 FY-80)

JMRASM DEVELOPMENT EDULE (FY-79)

TASK	FY-79 CY-79	FY-80 CY-80	FY-81 CY-81	Funding By PE (000) 63306	63369
GUIDANCE				2136.5	3,515.5
Encumbered					
Adv. Dev. of ATIGS/MICRAD (AIRTASK 9WO 551-W.U. 01)				(1,635)	
ATIGS at Mid-Course Guid. AIRTASK 9WO 551-W.U. 02)				(184)	
MICRAD as TERMINAL Guid. (AIRTASK 9WO 551-W.U. 03)				(165)	
DESIGN MM WAVE SEEKER (HONEYWELL) (NWC)				(97.5)	
MICRAD SOFTWARE (HONEYWELL)				(55)	
CONDUCT PHASE II GUID. DEV. (AIRTASK 9WO 650-W.U. 03)					(1,265.5)
PROVIDE RTV (AIRTASK 9WO 548-W.U. 01)					(1,100)
DEVLOP TECH. DATA BASE (AIRTASK 9WO 548-W.U. 02)					(950)
SQUINT MODE SEEKER (MOTOROLA) (APL)					(200)

Figure-1

JMRASM DEVELOPMENT EDULE (FY-79)

TASK	FY-79 / CY-79	FY-80 / CY-80	FY-81 / CY-81	Funding By PE (000) 63306	63369
Proposed					
DOPPLER PROCESSED SEEKER* (RAYTHEDN)					(100)
GUIDANCE SYS. DEFINITION* (ROCKWELL)					(100)
SYNTHETIC APERTURE RADAR* (WESTINGHOUSE)					(100)
PROPULSION				1,998	
Adv. Dev. for ALVRJ THERMAL Protection (AIRTASK 0627-W.U. 01)				(225)	
Adv. Dev. for ALVRJ Mgt. (AIRTASK 0627-W.U. 02)				(1,773)	
WARHEAD				738	1,000
LETHALITY OF UMT (AIRTASK 9W0650 NTWC)					(555)
LETHALITY OF K.E. (AIRTASK 9W0 650 NWC)					(445)
WPNS. SYS. INTEGRATION (AIRTASK 9W0 996)				(738)	

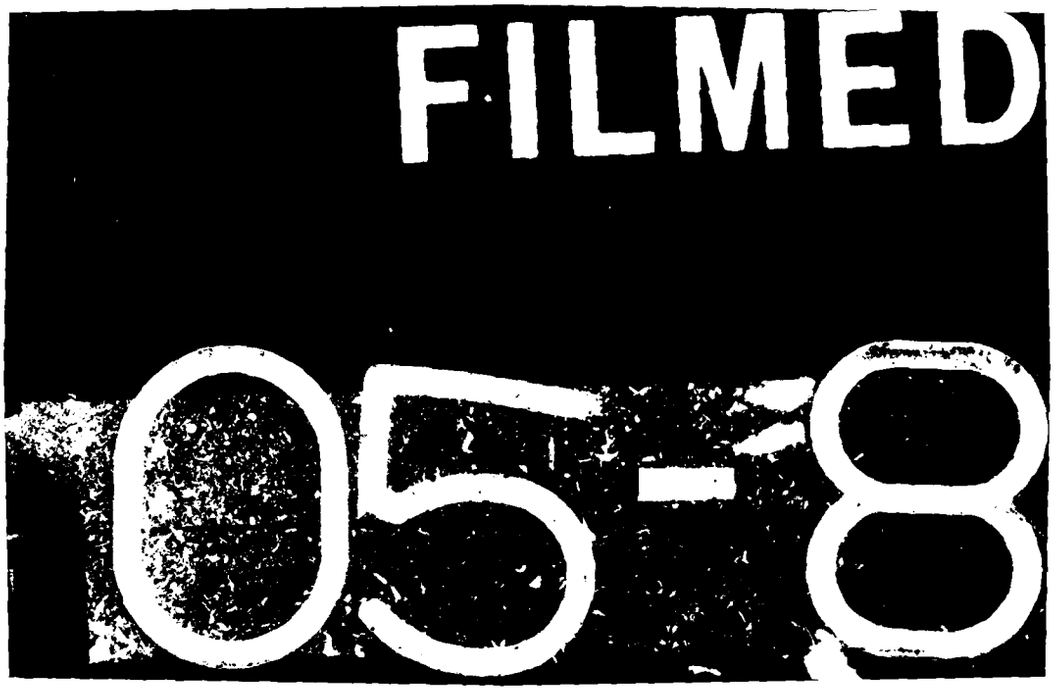
Figure-1 (cont'd)

JMRASM DEVELOPMENT EDULE (FY-79)

TASK	FY-79 CY-79	FY-80 CY-80	FY-81 CY-81	Funding By PE (000) 63306	 63369
SYSTEM INTEGRATION ACT:					
Encumbered					950
CONCEPT FORMULATION STUDY (AIRTASK 9W0 650-W.U. 02)					(450)
ASSESS NEW WPN SYS. ALT. (CNO)					(150)
THREAT ANALYSIS (FSI)					(100)
COST TRADE-OFF EVAL. (FSI)					(100)
ASSESSMENT OF RADARS (VEDA)					(100)
ANALYSIS OF MODEL STRUCTURE (MAL)					(50)
Proposed					
PROGRAM EXECUTION CRITERIA (MAL)					(50)
TOTAL				4,872.5	5,465.5

*Non-additive items to be funded from AIRTASK 9W0 548

Figure-1 (cont'd)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